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EDINBURGH NATURAL HISTORY SOCIETY COUNCIL

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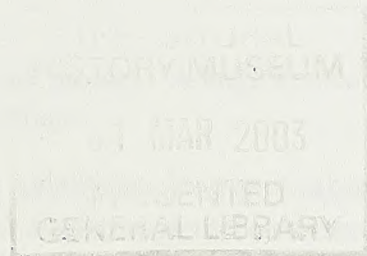
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PRESIDENT'S NOTES

The Journal this year is a real bumper issue. It reflects the wide range of activities and interests that the NATS enjoy. Despite the rather frequent mention of precipitation from above, the Excursion Committee organised a wonderful programme of outings. Anyone who might be thinking about joining these events will be greatly encouraged when reading about the biodiversity that our intrepid members have encountered. More people than ever have been inspired to write interesting short notes and longer articles which all serve to show the scope for developing an active interest in natural history. Our thanks to the editors, the contributors, the distributors and those who make the activities of the society possible throughout the year.

Heather McHaffie

LIBRARY

The Council has agreed the purchase of a number of new volumes. Joyce and Robin have been doing a sterling job in updating the Library list with the help of Ena Gillespie who is computerising the information. The new catalogue will be available soon. A considerable number of books are missing from the Library. A note of these, new and missing ones, is included in this postage. Please check your bookshelves, under the bed, in the cupboard and if you find any, return them to Joyce.

Our Library contains a wealth of information and photographs from the past, snippets from which have been included in this Journal.

OBITUARIES

DICK HUNTER (1906-2002)

Dick Hunter who died, aged 95, on Sunday 24th February 2002 was an Honorary Member of both the Edinburgh and Glasgow Natural History Societies. He was also an active member of the Ramblers Association and the Scottish Wildlife Trust. He was a prolific watercolour artist.

Dick was born in the village of Slamannan in Stirlingshire. His mother, of whom he spoke fondly, brought up a family of seven. It was only on looking back that he realised how hard life had been. He often spoke of his school days and recalled children going to school in the summer and sometimes even in winter with bare feet. He had happy memories of his childhood and could recount vividly conversations he had had when he was five years old; when, for instance, his sister would clype to his mother that he had stopped stirring the porridge.

As a young man he worked in the coalmines. About this time his mother died and when his father remarried, Dick went to live with a married sister in the Coatbridge area. These were the days of the depression and he would say that his sister should have been made Chancellor of the Exchequer because of her ability to run the household on a pittance. At this time he was a keen cyclist and covered the length and breadth of Scotland. After a spell working in a brickworks in Bonnybridge he joined the army in 1939 and was posted to India and Burma where he was a radio mechanic. He would say that he was not a very good soldier. One day after having a cup of tea in a cafe, he left without his rifle. He returned two days later to find his rifle still propped up in the corner where he had left it! His memories of Burma were of the exotic vegetation and he always wanted to return there when he became a proficient botanist, but he never did.

Demobilised, he returned home, constructed tennis courts, and then maintained bowling greens until he retired when he was 75. During his tennis court days one of his assistants 'knew' the flowers. This sparked an interest in him to study botany and from his mid 40s he developed a passionate interest in plant life. He was a regular at many of the Field Centres, where he attended courses on flowers, grasses, mosses, sedges, fungi and trees.

He joined the Glasgow and Edinburgh Societies and became a very popular and competent excursion leader. Apart from his official outings he delighted in taking groups of friends around Mugdock looking at mushrooms, sedges,

plants and mosses. A large number of people benefited from his good humour, patience and expert tutoring on these outings.

He was probably happiest in Mugdock where he had intimate knowledge of the locations of the rarer fungi. Most of us remember his gleeful chuckle when he discovered some hidden treasure. He delighted in introducing people to the fascinating world of fungi and explaining how to identify the different species. Occasionally I would ask him to explain the diagnostic features of a particular species. He explained that he recognised a specimen as he would a person. You did not need to know in detail a person's height, colour of hair etc. to recognise him; and it was the same with plants.

I have seen him discussing in a very learned way with visiting botanical dignitaries some finer point of mycology. Not bad for some one who started work in the mines! When he came across a fungus he could not identify, he was known to take a spore print, make a watercolour painting of the fungi and send them off to Professor Roy Watling who, as always, would be helpful and reply to Dick with the answer.

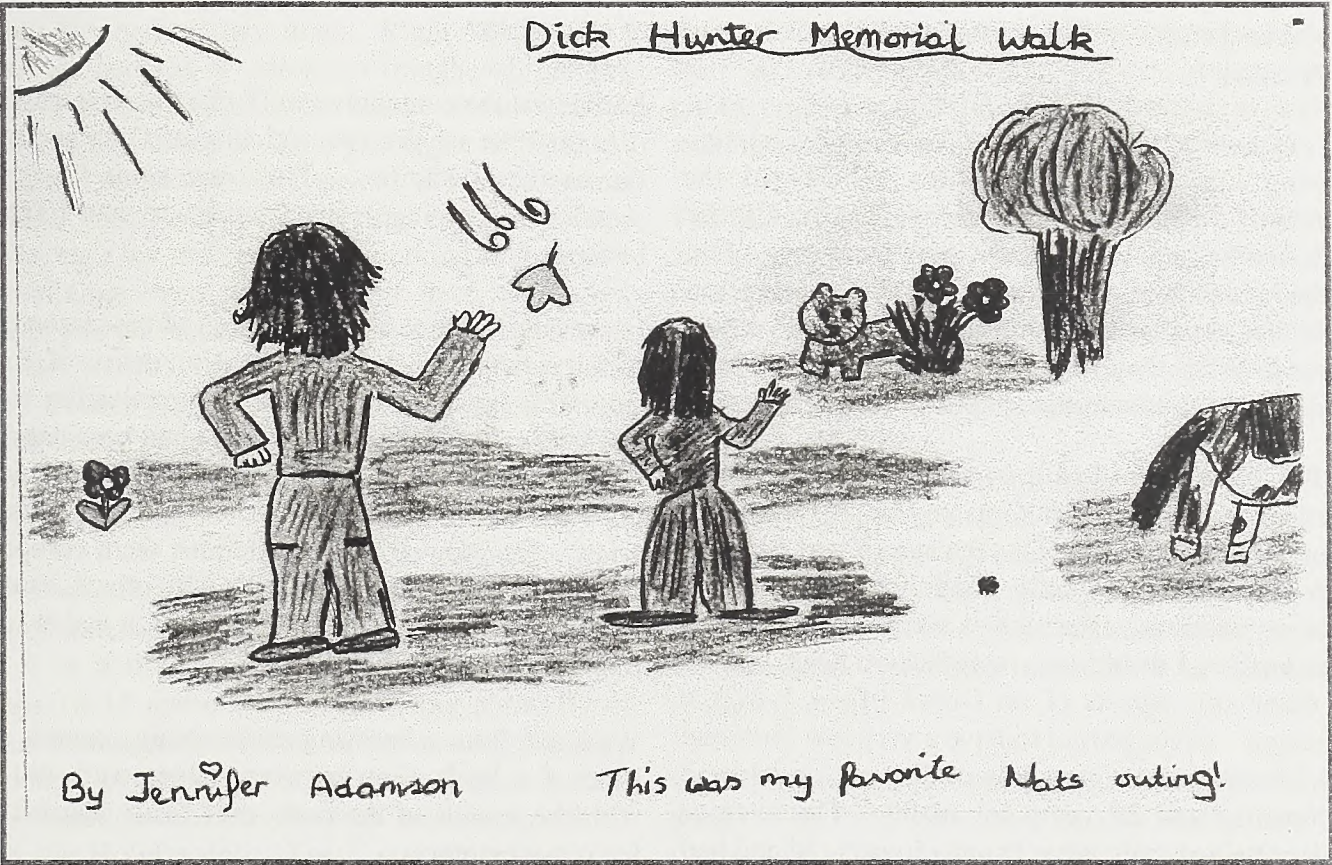
The 1996 Journal published an article celebrating his 90th birthday entitled 'Many Happy Returns, Dick'. The article recounts that when he was 90 he assisted Ian McCallum in leading an outing to Loch Lubnaig.

On his 90th birthday the local Ramblers Group hosted a party for him in Dougalston Golf Club Restaurant on the 13th April 1996, when local artist Priscilla Dorward presented him with a splendid portrait of himself.

The Glasgow Natural History Society also honoured his 90th, at a celebration dinner at the Burnbrae Hotel when the late Camilla Dickson made a cake for him with 90 candles on it. After blowing out the candles he commented 'If I had known that I was going to live as long, I would have taken better care of myself.'

He was one of Nature's gentlemen.

Ian C McCallum



DEREK WELLS

Derek Wells became President of the ENHS in 1960. After graduating in Agriculture at Newcastle he came to Edinburgh to work at the East of Scotland College of Agriculture. In 1966 he moved to Monks Wood Experimental Station where he worked on Lowland Grasslands. Later he worked with Dr Derek Ratcliffe as a specialist adviser on grasslands, heaths and agriculture. When he retired in 1990 he was Senior Grassland Ecologist with the Nature Conservancy Council.

On one occasion Derek led a very successful week-long trip to the Norwich area which he knew well from his childhood.
Elizabeth Farquharson

Uncovering the Secrets of Orca: The Killer Whale

From Canada to Russia and Around the World

by Erich Hoyt

Thirty years ago when I stumbled into research on Killer Whales, or Orcas *Orcinus orca*, no one knew very much about this animal. At that time Orcas were being taken in some numbers for Sea World and other aquariums around the world, as well as being shot by fishermen, and the Canadian government wanted to know if the numbers being removed should be regulated. At that point, all the captives had come from around Vancouver Island in Canadian and US waters.

A Canadian seal researcher, Michael A. Bigg, working for the Department of Fisheries and Oceans, had the job of answering this question. Working together with a loose group of researchers, photographers, filmmakers and others who were simply interested in Killer Whales, including myself, Bigg determined that photographs of the dorsal fins made all the Orcas individually identifiable. The challenge then became to get photographs of all the Killer Whales around Vancouver Island. It took 3 or 4 years before the rate of newly discovered animals moved toward zero, and then the study expanded to nearby Washington State waters, and northward to northern British Columbia and Alaska.

The eventual result was a catalogue of dorsal fins showing virtually all the Killer Whales in the northeast Pacific. The total numbers proved to be much smaller than anticipated - there were only a few hundred animals off the British Columbia-Washington coast, not thousands as the aquarium captors had claimed. And they lived in complex matrilineal groups, pods, communities, populations.

Dr. Bigg then worked with population biologist Peter Olesiuk and field biologist Graeme Ellis to devise life history tables of the whales. Because it was possible to identify photographically and follow every animal in the populations, these tables were in time able to show birth and death rate, reproductive ages, and all the other key aspects of an Orca's life. It was a revelation. Orcas proved to have a very low birth rate of 2-3% a year, with longevity of 50 years on average for females and 29 years for males. The average female attained maturity at about 15 years old and had 5 successful calves over 25 years, then became senescent for an average of 10 years.

Almost from the start, we realized that these weren't randomly associating animals. In fact they lived in tight groups based around the mothers. Male calves stayed with their mothers for life, even after they matured, when the up to 6-foot high dorsal fin sprouted to more than twice the size of the female fin.

Female calves stayed with their mother until they started having calves of their own. Then they would form their own matrilineal group which still stayed close to the mother's group but increasingly made sorties away.

Most of our time was spent with 'resident' Orcas - Orcas living in large extended family groups, called pods, with 7 to 15 or more members. These pods fed on salmon and other fish and could sometimes be seen swimming with Minke Whales and Dall's Porpoises, known Orca prey, without either potential predator or prey getting excited.

In time we learned that there was another population of Orcas moving through our area, called transients. These lived in smaller more fluid groupings of typically fewer than 6 individuals. They moved erratically through an area, often following the coastline, and had pointed dorsal fins, unlike the more rounded fins of the residents. We began to watch them hunting Seals, Sea Lions, Porpoises, Minke Whales - and they seemed to be uninterested in salmon or other fish.

Looking at the cumulative work of a dozen researchers, it is possible to glimpse a picture of Orca society in the northeast Pacific. There are some 7 separate populations ranging in size from fewer than 100 to up to about 300.

In the late 1970s, a new component of the research was added when John Ford of the University of British Columbia began to record the communication sounds of Orcas called pulsed calls. There had been anecdotal suggestions that Orca pods each had their own dialect, but Ford quantified this by recording all the separate pods. He showed that populations were completely different, sharing no pulsed calls with others. But even within populations, individual pods each had at least a few unique sounds.

We knew from witnessing and recording sounds at the time of a birth, that newborn calves were not born with the sounds of the pod; they likely learned them from their mother.

Ford erected genealogies based on the numbers of sounds shared by pods within each population. His 'family trees' suggested that, if new Orcas were learning the sounds of the group from their mothers, then it should be possible to show the degree of relatedness of all the pods based on the numbers of sounds they share with each other. Distantly related pods whose common ancestor was many generations

earlier would share only a few sounds.

In the late 1980s and early 1990s a new tool arrived - biopsy sampling - which enabled researchers to throw small darts into the backs of the whales to gather and analyze a piece of skin and blubber. The skin enabled genetic analysis, while the blubber was useful for identifying contaminant levels.

To a large extent the genetics have confirmed the findings of the photographic-identification (photo-ID) and sound work in terms of the separation of populations. It has been possible to estimate how many generations separate the transient from the resident Orcas, as well as the degree of separation from Orcas in the North Pacific and those in the North Atlantic or Antarctic. It appears that Orcas worldwide are not so genetically diverse and there is evidence that in their recent history (last few thousand years) they went through a 'bottleneck'.

The work on Orcas, has almost precisely paralleled the scientific work on Humpback and Right Whales, and on Bottlenose Dolphins which also began in the 1970s. All rely on photo-ID, sound recording and biopsy, but with some differences. The photo-ID of Bottlenose Dolphins uses dorsal fins as in Orcas, but photo-ID of Humpback Whales focuses on the unique patterns on the underside of their tails which they reliably lift before they dive; Right Whale work utilises the patterns of callosities (roughened patches of lighter coloured skin) on the head. Some decades earlier, ethologists led by Niko Tinbergen and Konrad Lorenz had helped advance the study of land animal behaviour, using individual markings (e.g., elephants, giraffes, etc.) but the logistics of working at sea made the challenge even greater. But once the initial research proved successful, it was only a matter of a few years before it spread to more populations of the Orcas, Bottlenose Dolphins, Humpback and Right Whales, and to other whale and dolphin species. Work on the Bottlenose Dolphins in Northeast Scotland began in the 1980s.

In 1975 when I went to one of the first international whale conferences, held in Bloomington, Indiana, there were 4 or 5 of us then doing Orca research, and perhaps 10-15 researchers in all doing photo-ID of various whale species. It was an exhilarating learning experience - even though I slept in an old borrowed car for the duration of the conference because I couldn't afford the Holiday Inn. There was no society for whale or marine mammal research, no journal to publish papers, no student grants for housing or assistance to come to conferences.

Today, the Society for Marine Mammalogy has more than 2,000 members, many of whom employ photo-ID techniques. And in Sept. 2002, when I attended the IV World Orca Symposium in Chizé, France, there were more than 150 researchers working on Orcas

from around the world, most using a variation on the original methods from Vancouver Island to study their population and compare it with others. The studies are based in the Crozet Islands (southern ocean, France), Antarctica, Australia, New Zealand, Papua New Guinea, South Africa, Iceland, Norway, Greenland, eastern Canada, and elsewhere.

One of these new studies - one that I've been involved with since 1999 - is based in the Russian Far East. The Kamchatka (Far East Russia) Orca Project began in 1999 as a pilot survey to see if it would be feasible to research Russian Orca populations which had never been studied before.

Part of our motivation for the project came from our anxiety over future possible live capture and international Orca trades among the world's aquariums, especially Japan's Port of Nagoya Public Aquarium. Our aim has been to learn about the local Orca biology to understand their life history and to use the knowledge to promote conservation awareness locally and internationally.

Our 1999 pilot survey results encouraged us to develop a multi-year Orca survey based out of the Kamchatkan capital city, Petropavlovsk-Kamchatskiy. Our study area is accessible from the city, and Orca groups appear at least in summer months on an almost daily basis; the animals seem to be attracted by salmon species as well as Atka Mackerels. We began taking photographs for individual identification, as well as making underwater sound recordings.

The following year, our first full season in September 2000, we located our field base on Starichkov Island near Petropavlovsk. Our field team invited three Russian student biologists, and we put more effort into taking ID photographs, making sound recordings. We started land-based Orca observations from the island.

For our second full season in August-September 2001, we were stationed at a camp on Starichkov Island, and kept our usual survey efforts for photo-ID, sound analysis, as well as the land-based observations. Our survey results provided good evidence of the presence of a resident-type Orca population in the central Avacha Gulf area.

Our third season, just completed, was divided into 2 parts. The first, sponsored by the Alaska Sea Life Centre was a 1600 nautical mile sighting cruise along the entire east coast of Kamchatka; the other was the continuation of our land-based and mobile unit in Avacha Bay near Petropavlovsk-Kamchatskiy.

Our achievements include the preliminary identification of 151 animals from the base camp, the discrimination of some 20 call types, and the observation of strong associations between the Orcas and the spawning concentration of Atka Mackerels and

salmon near the island. During the Kamchatka cruise in July-August 2002, we found 252 Orcas, photo-IDed many of them, and made useful sightings of Humpback, Gray and Fin Whales. We photo-IDed the Humpbacks and will coordinate our results with existing photo-ID catalogues for Humpbacks in the North Pacific (Kyoichi MORI). With our previous survey results, two of the Russian student biologists (Olga Filatova and Karina Tarasyan, Faculty of Biology, Moscow State University) completed their MSc. degree in 2000. Also, our preliminary findings were presented in nearly a dozen papers and posters at the 14th Biennial Conference of Marine Mammals in Vancouver, in November 2001, followed by the 2nd Marine Mammals of Holarctic conference and the IV Orca Symposium in France, both in September.

It is too early to say whether we have been successful in stopping the capture of Orcas in Russia. In late 2001, the Russian Marine Mammal Council recommended quotas for the capture of up to 5 Orcas for the year 2002. A captor then applied for 2 permits to the regional board for Sakhalin. The capture boat was seen leaving Petropavlovsk-Kamchatskiy in mid-summer for northeast Sakhalin. It is not known how many attempts were made to capture Orcas, but none were taken. In November 2002, the Marine Mammal Council doubled the quota to 10 Orcas, including 4 from our study area. We plan to continue to argue against this and oppose it publicly within Russia.

We have to wait until our lab analysis is done over the next few months, but the increasing ratio of re-sightings and the limited call repertoire number gave us an impression that we have found the usual residents in the central Avacha Gulf area (more specifically around Capa Opasny and Starichkov Island) at least in late summer.

In addition to the Orca observations, on our transect cruise along eastern Kamchatka, we had more opportunities to have close encounters with Sperm, Minke, Fin, Gray and Humpback Whales, as well as Dall's and Harbor Porpoises some of which were also seen in our immediate study area. These casual and accidental cetacean encounters encouraged us for the possibility of the presence of the mammal-hunting type of Orcas, as well as for developing future ecotours based out of Petropavlovsk-Kamchatskiy.

In 2002, along with several times as many photo-IDs as in previous years due to our long Kamchatka cruise, we obtained about a dozen selected biopsy samples along the Kamchatka coast which will be used for various comparative analyses of genetic and contaminant work both within Kamchatka and in comparison with other world populations of Orca.

We are now beginning to envision an ambitious goal - a catalogue that would contain all the photo-IDs, sound recordings and biopsies for the entire Russian Far East. It will take years of course but the formulation of the goal is the first step and the chance that we may succeed: that and making a place for Orcas and the Russian researchers and communities who want to get to know them and to care for them.

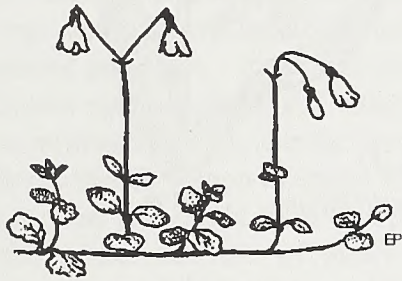
Erich Hoyt is senior research associate with the Whale and Dolphin Conservation Society and co-director of the Far East Russia Orca Project (FEROP). He is the author of Orca: The Whale Called Killer, and other books on whales, dolphins, social insects and the deep sea. He has published more than 350 papers and articles on his work. The November 2002 BBC Wildlife Magazine reported on Hoyt's work with the Russian Orcas. The Russian Orca research team has recently put together a website where you can follow the research (see www.russianorca.narod.ru).



Flowers of the Yukon

Margaret Watson

A re-reading of the 2001 Journal shortly after our return from a month in the Yukon with our Canadian family has prompted me to relate something of the pleasures of botanising in that part of the world. My Yukon Flora has been so overused that its loose pages have now been converted to a ring-binder system!

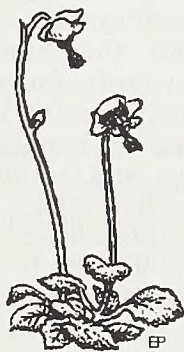


Twinflower

borealis,

Twice in that Journal mention is made of delight in finding that rare Scottish plant, the Twinflower *Linnaeus*

but in the Yukon I was often walking on forest floors carpeted with its long trailing runners, the leaves reddish in colour and the small twin flower-heads held above them. Often in the same habitat I would find members of the Wintergreen family, the commonest being the one called there the One-sided Wintergreen *Orthilia secunda*; more rarely the attractive pink Large Wintergreen *Pyrola asarifolia* or the inconspicuous Greenish-flowered Wintergreen *P. chlorantha*. But only three or four times in my last two visits have I found the lovely white Arctic Wintergreen *P. grandiflora*. Two of our NATS members recorded the discovery in Sutherland of a favourite of my own, the flower which in the Yukon is called Single Delight, *Monesis uniflora*. The down-turned waxy petals seem to me - like the plumage of a gannet - to be whiter than white.



Single Delight

The floral emblem of Yukon Territory is the Fireweed, our Rosebay Willowherb *Chamerion angustifolium*, and this year we were over there at the peak of its season, when whole mountains and lake-sides are carpeted in purple. Forest fires, sometimes covering huge areas, are part of the eco-cycle, (though sometimes caused by careless humans rather than lightning), and Fireweed is the first conspicuous re-coloniser after a Burn. An even showier plant is the Dwarf Fireweed or River Beauty *Epilobium latifolium* which in places lines lake, river or highway with deep rose-purple.

Walks on Haekel Hill, where two wind-vanes contribute to Whitehorse's power supply, remind me of excursions to Ben Lawers. Here are Dwarf Willows *Salix arctica*, Mountain Avens *Dryas octopetala*, Tufted Saxifrage *Saxifraga cespitosa*,

(I have yet to find the Purple Saxifrage), together with a Mountain Buttercup, Shrubby Cinquefoil, a Gentian resembling Felwort, and Harebell *Campanula rotundifolia* which in those conditions is very low-growing.

A flower which is much welcomed after the long Yukon winter is the Wild Crocus or Pasque Flower *Anemone patens*, which appears just after the snows have melted; and one which on one visit I was taken to see, high in the mountains of B.C., was an *Erythronium* known as Glacier Lily, sheets of which were flowering at the very edge of the snow-fields, in company with a yellow pansy-like Stream Violet *Viola glabella*.

'Bluebells' in Western Canada is not our familiar Wild Hyacinth, indeed not a bulb at all but a Lungwort *Mertensiana paniculata* which is widespread and with a much longer season than ours. And other showy blue flowers are two species of Jacob's Ladder *Polemonium boreale* and *P. pulcherrimum* and a very local 'Yukon Beardtongue' *Penstemon gormanii*. Widespread too is the Wild Lupin; in the Whitehorse area and northwards it is *Lupinus arcticus*, but further south the species is *L. nootkatensis*, which I notice is the one in our British Flora 'from N. America' and which appears on shingle on some of our rivers.

A long list of flowers seen is scarcely appropriate for this article - perhaps it is sufficient to say that many species of *Compositae*, *Leguminosae*, *Cruciferae*, *Rosaceae*, *Ranunculaceae*, *Ericaceae*, *Saxifragaceae* occur, to name but a few, but they are very seldom exactly like those in the U.K. Common Yarrow, the introduced Dandelion and Melilot are exceptions which come to mind. A familiar but surprising sight in one small lakeside township was a thriving colony of Common Toadflax *Linaria vulgaris* which wasn't in the Yukon Flora, so is presumably a recent introduction. Progress across pathless hillsides, scrub or forest is unencumbered by Nettles, Thistles, Brambles or Goose-grass, but dispersal of seed by burs at ankle-level can certainly occur, especially from a common plant called very appropriately Stickseed *Lappula myosotis*. The widespread Wild Rose of the Yukon is a small, sometimes very small, bush *Rosa acicularis* which bears bristles rather than hard thorns.

I haven't mentioned any of the many berry-bearing plants and shrubs which provide invaluable food for the wildlife - and indeed the native tribes and early settlers in the area. It is noticeable that the Flora includes in so many descriptions a remark about the uses of root, leaves, fruits or stems as food or medicine - or a warning of poison to man or beast. This year we found widespread and very attractive patches of the lily

with the local names of Elegant Poison Camas or Mountain Death *Zigadenus elegans*, which is even more lethal than our Destroying Angel fungus.

Highlights of recent visits have included the finding of a single Calypso or Lady's Slipper Orchid *Calypso bulbosa* near a Provincial Forest car park in B.C.; in two Yukon locations the less spectacular Sparrow's Egg or Northern Lady's Slipper *Cypripedium passerinum*; the very odd red-brown 'pine cone' shape of the uncommon Broomrape which parasitizes spruce-roots, locally called Ground-Cone *Boschmakia rossica*; the intense blue of the tubes of the tall Bearded Gentian *Gentiana barbata* growing in the shelter of a ruined log-cabin; the surprise of seeing Yellow Waterlilies *Nuphar polysepalum* on a small lake near the summit of White Pass with snow patches all around (this was July!); then in woods nearer sea-level the sinking dark-brown bells of the Chocolate Lily, the only Fritillary of the region.

I should add that our family's home in Whitehorse, in the valley of the Yukon River, lies about 2000ft. above sea-level, and several nearby mountains top 6000ft., so many of our excursions are at heights exceeding those of the Scottish Munros!



Glacier Lily
Erythronium grandiflorum

...sheets of them flowering at the very edge of the snowfields.

§ §

§ §

Ash *Fraxinus excelsior* - OLIVE Family

Ash is a native tree which thrives in damp, base-rich soil. It is a tall-domed, beautiful tree with strong ascending branches and a grey bark. Its black suede-like buds are distinctive and the tree is usually the last to come into leaf. The flowers however appear much earlier in the year and give the tree a purplish-red colour. They are a confused mixture of male and female, either together on the same tree or on separate trees. Single seeds with a long wing are produced, hanging in bunches called keys. The leaves are opposite and pinnate consisting of 9-13 pairs of leaflets, with a larger terminal leaflet on a 2 centimetre petiole.

Fraxinus means firelight and Ash was traditionally burned as the Yule log. The Scandinavians considered the Ash to be the 'Tree of Life', source of wisdom, fate and magical powers to protect against charms and evil spirits. They believed that Odin, King of the Gods, carved the first man from an Ash trunk. Druids carved magical images from Ash roots, while the branches taken in summer when growth was strongest, were used for prophecy. The handle of the Witches' Broom was made of Ash wood, the twigs being Birch bound with Willow.

Snakes were believed to be afraid of Ash, so Ash leaves were considered good protection against them and used to treat those unfortunate enough to be bitten.

Long ago it was a Highland tradition to give a new-born child a spoonful of sap from a green Ash stick heated on the fire, to make it strong, and to protect it from witches and goblins. It was also thought that a ruptured child could be cured by passing him naked through the cleft of a pollarded branch held open with a wedge. The cleft was then bound close and as the Ash healed, the child healed also.

Leaves and bark had medicinal uses for fever, rheumatism, arthritis, liver and kidney ailments, even gout. Ash keys were carried against witchcraft.

Ash wood, almost pure white, provides the toughest and most pliable timber. It was traditionally the wood of the shepherd's crook and the huntsman's spear, and is still the favourite for walking sticks. It was a farmer's wood, being used for carts and wagons, fencing and for handles for pick, spade, fork, pitchfork, axe and hammer. It also makes billiard cues, hockey sticks, oars and spars, cricket stumps, tennis rackets and skis.

The only adverse thing I have read about the Ash is that bad luck follows if a branch is broken off the tree; and that lightning runs to the Ash, as to the Oak.

**Avoid an Ash
It courts the flash.**

Ash as firewood is "the sweetest of our forest fuelling and fittest for ladies' chambers burning even when it is green," according to John Evelyn.

Briefly, in Britain and Europe, the Ash was a sacred tree as was the Oak, the subject of legend and superstition, and a source of indispensable timber.

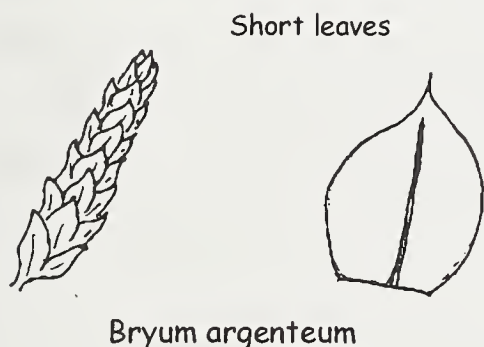
Excelsior!

Mary Robertson

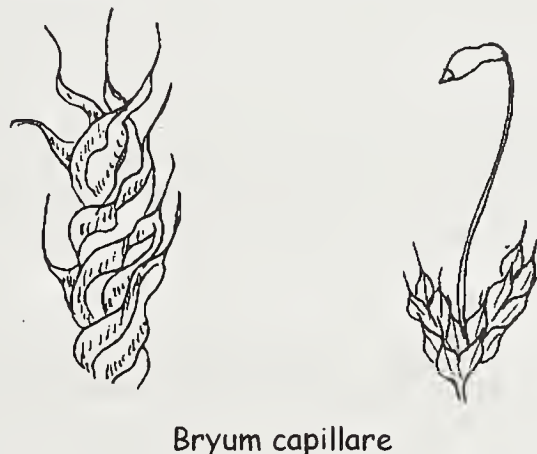
BRYOPHYTES AT THE BUS STOP

by Heather McHaffie

One good thing about having a range of interests is that there is no need ever to lack something to look at, wherever one might be. Standing at a bus stop in a busy street, with no apparent vegetation, could be chosen as an example of a sterile environment, but not so. Have you looked at the cracks in the pavement? Even without causing too much unrest among the general populace, it is often possible to detect two distinct species of moss. One is very small, up to ten millimetres high (can be up to fifteen!) and has a silvery sheen. When everyone else's buses have been and gone you might have an opportunity to see that this species consists of many tiny narrow shoots jammed together in the pavement cracks. This is *Bryum argenteum* and seems to thrive between the kerb stones of busy roads, appreciating a high input of nitrogen.



Another species of *Bryum* is a deep green in contrast. It could be on the pavement but often occurs on walls as well. *Bryum capillare* has broad, spreading leaves when wet, but these wrap themselves up in a spiral during drier periods. It is larger than *B. argenteum*, easily reaching two or more centimetres. Like many *Bryophytes* that grow in desiccating conditions, *B. capillare* has a long hairy leaf point extending beyond the tapering end of the leaf. This can be seen by holding the plant up to the light, or better still, using a hand lens. This species is often fertile and the capsules are very conspicuous. The capsules are at the top of a reddish stalk, or seta; when immature they point upwards, but soon are inclined or drooping like little reddish-brown pears.

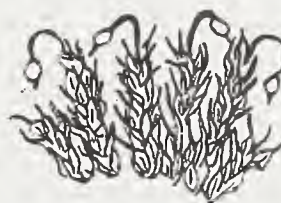


Looking at walls, particularly on mortar or old harling, there is another hairy moss with short rosettes of leaves, up to ten millimetres, forming little cushions of single shoots spreading across the surface. *Tortula muralis* has tongue-shaped leaves which are yellow-green and the nerve up the middle of the leaf continues into a long hair point. Like the previous species these can also twist into a spiral when dry. A conspicuous feature is the capsules. These always point upright and are yellow when young, browning with age, but still pointing upwards, unlike *Bryum capillare*.



Tortula muralis

Usually on top of the wall, there are very neat, tight, hairy cushions of *Grimmia pulvinata* that are up to fifteen millimetres high. The capsules on their little stalks, setae, are very different from any mentioned so far. When young, the capsule almost seems to burrow into the cushion, and this can usually be found by looking at several cushions. As the capsules mature they are lifted clear of the cushion but the green setae are still short and the capsules are characteristically shorter and rounder than any of the other mosses described so far. There are, of course, several other species that grow on walls, but the species described should be found without a great deal of difficulty. It is always worth looking at several different examples at different sites, as some might not be typical.



Grimmia pulvinata

There is one *thallose* liverwort called *Lunularia cruciata* which is common on bare soil in gardens and pavements in places kept damp by leaking gutters. This has a light green thallus, like an irregular, much branched ribbon, five to ten millimetres wide. Close examination will usually find strange little half-moon-shaped cups. Even closer examination will reveal glistening disc-like objects inside these cups, and these are gemmae.

Gemmae are multi-cellular structures that can grow straight into a new liverwort thallus. Any disturbance, as in weeding, or heavy raindrops, scatter the gemmae and a dense covering of liverwort is soon re-established as many gardeners will testify! If the gemmae cups are

HUGH MILLER

by Heather McHaffie

Hugh Miller was very well known in his own time but has since been largely forgotten by most people. Throughout 2002 there have been events all over the country, but particularly in his home town of Cromarty, to celebrate the bi-centenary of his birth. An imaginative and intelligent child, his sea captain father was drowned when he was five and he was thereafter much influenced by two uncles. They encouraged an interest both in the local environment and in folklore. Although he read everything he could find or borrow, he was a reluctant scholar and left school to become a stonemason. This was in emulation of a cousin, and it gave him the winter months to spend on literary pursuits of his own choice.

The work was physically very demanding and left him a legacy of ill-health and lung disease. He discovered much about the landscape, scenery and people of the north of Scotland and even worked in Edinburgh, where he witnessed the 1824 fire in the Old Town. He was very critical of the social conditions of the time, which directly affected him as a stonemason. This is illustrated in the fact that workers were expected to live in one end of a building while demolishing the other end for building stone. All this time he was writing, first poetry, but later more successfully in prose. He was also greatly impressed by the fossils that he found in such abundance in the rocks that he quarried and on his own excursions. Independently at first, he reconstructed the strange fish that he found compressed in nodules on a nearby shore at Eathie. Later, he communicated his findings to the foremost experts of his day and even now his observations are still referred to and found to show astonishing accuracy.

Through ill-health, he changed from a mason, to a carver of distinctive gravestones, and eventually became a bank clerk to satisfy his prospective mother-in-law that he had suitable status. His first successful book was a collection of local legends *Scenes and Legends of the North of Scotland*. After he was married he lived in Cromarty for several years but was eventually summoned to Edinburgh where he lived for the rest of his life. This is the period when he became a well-known name throughout the country.

There was a growing controversy which caused enormous debate and dissent at this time. An Act in 1712 had given local landowners the right to impose their choice of minister upon a congregation. This had led to many disputes about candidates who were not thought to be suitable. A famous case was being much debated when Hugh Miller entered the arena and wrote an open letter which was published amidst much approval. Hence, he was invited to come to Edinburgh to edit a newspaper to be called *The Witness*, to represent this point of view, contrary to all the other newspapers at that time. He was a prime mover in the events of the Disruption in 1843, when the Free Church was established. In the newspaper he published the current news, blistering comments on church issues and many articles recording his observations on society, his own research in geology, and extremely interesting observations made on his summer holidays!

Tragically, he seems to have suffered what at the time was called 'brain disease'; he had terrible nightmares and shot himself in 1856. From books that he had prepared, and sets of articles from *The Witness*, thirteen volumes of his writings were eventually published and went through many editions. Then gradually, he was forgotten. His scientific work is still appreciated and his fossil collection is held in the National Museums of Scotland. His house that his great-grandfather built in Cromarty has been preserved and now belongs to The National Trust for Scotland. It is an interesting survival of a traditional 18th century building and worth visiting for itself. There are several fossils and personal possessions of Hugh Miller kept at the house. Cromarty is also a fascinating place to visit, with a museum and a new town laid out in the prosperous years of the late eighteenth century. Some of his books are being reprinted and perhaps the best to read first is *My School and Schoolmasters* where he describes his education (everywhere but in school), until the time he went to Edinburgh. There are several very good books about Hugh Miller in the Public Library, of which George Rosie's *Hugh Miller, Outrage & Order* is probably the best. Hugh Miller was a very interesting writer and his books merit being read more widely.

MORE ON WHALE ARCHES

by Elizabeth Farquharson

In the 2001 Journal a summary was given of all the whale arches so far located in Scotland. In the weeks following, members added bits of information about existing arches and made suggestions of possible sites where more might be found. So far no new arches have been found but Joe Wright sent me a cutting from the Stornaway Gazette of 10 September 1920 which tells the tale of the arrival of the dead whale in Bragar Bay.

There is no mention of a harpoon, so perhaps this was added as a decoration when the jaws were mounted.

Rorquals migrate through Scottish waters in the spring and autumn and were hunted until 1922 from the Hebridean whaling stations.



STORNAWAY GAZETTE. Friday 10 September 1920 Price 2d

Local and District News.

A Monster of the Deep – A correspondent writes :

On Saturday of last week the villages of South Bragar and particularly those of Fevig were a bit excited on hearing from boys who were fishing on the rocks nearby, that a large whale was floating into "Geo na Muic" (the Whales Cave). In a very short time crowds gathered on the cliffs, and sure enough, there it floated – a huge dark mass – so huge in size that it was difficult to imagine that this massive body was quite recently a living mammal. It floated in and in towards the cave, head first as if steered there and finally reached the pebble shore at the extreme end of the cave, but there was no possibility of salvage operations being carried out there. By Monday morning, the occupants of the houses in the vicinity were alarmed at the idea of the monster remaining there indefinitely – as they feared the smell would be unbearable if the whale was not removed – for it looked as if the job was too big for the hands to tackle. But the saint that drowned the Hun was not to be beaten by a dead whale, however large. A few ex-service men were volunteered to try and remove the monster, which was already jammed in the cave. They lassoed the huge tail and pulled with might and main, and got it out into the open sea.

But the men had a more practical purpose to serve than to remove the nuisance: they wanted some of the blubber while yet fresh. With this end in view, thanks to the present glorious weather and with a suitable tide, they landed the carcase in Bragar Bay, about two miles distant, where it is now beached and entirely out of the water at low tide. The measurements, which were accurately taken are as follows:

| | | |
|------------------------------------|---|----------|
| Length from nose to centre of tail | - | 82 feet; |
| Length of tail, point to point | - | 18 feet; |
| Diameter across | - | 24 feet. |

It would appear to belong to the family known as Rorqual whales. As yet, it has not been touched, but as I write, -I hear the continuous sound of knives being sharpened.

Do you really want a wildflower meadow in your garden?

John Sheldon

I have been trying for eighteen years and still not perfected the art, or rather the science, of creating and managing a wildflower-rich grassland on the garden scale. However, I do feel I have reached the halfway stage where there are peaks and troughs of triumph and despair, and not just the troughs. But I have also come to appreciate that nature does it far better, in the rare herb-rich grasslands that can still be found in isolated places in the Lothians. It is certainly not as easy as it would appear on *Gardeners' World* and involves a lot of hard work when you do not have a tractor and the associated equipment, so why bother? In my case, I suppose it is the challenge and, by thinking of it as an ongoing experiment, the reasons for failure are just as interesting as the successes. If you are still keen to create your own meadow then read on, but this is not an article on how to do it.

My own experience goes back to 1984 when the family moved to a new home in East Lothian, which sits in 3 acres of garden. A third of this was already in woodland, although this was largely composed of Sitka Spruce. They have now gone, and been replaced by native trees - but that is another story.

The plan for some wildflower grasslands came as the garden began to take shape, since fortunately there was no garden - just lawns, this being one of the attractions of the place. At the outset, in the design master plan, it was always the objective to create different garden types to satisfy the plant collecting obsession; and to build a garden with variety and colour, but with a keen eye on low maintenance. The ambition was not to establish a showcase but to provide a garden with areas to be enjoyed at different times of the year.

Into this formula wildlife had to have its place, since in its former state it was a grassland desert and without birds, insects and animals no garden is worth the effort. Therefore, the design also had to have habitat objectives and this is where the wildflower meadow challenge came up. As a result there are now a number of areas managed in different ways in an attempt to achieve this, utilising previous areas of lawn that would otherwise be closely mown.

At the outset the thin soils shouted out the possibility, but experience has shown that even these were too nutrient-rich and should have been stripped off to start the process from scratch, as the text books advise. But that suggested a lot of hard work and life is too short! The first area attempted was destined to become woodland either side of the entrance drive, so really the objective was not a wildflower meadow at all, but a grassland full of winter and spring flowering

bulbs that would eventually sustain themselves under a developing tree canopy - a variation on the theme. I have to admit that this has worked, since from January to May there is a continuous succession of native and introduced flowering bulbs, providing colour and welcomed nectar for the resident honey bees on the warmer days.

It all starts with Aconites [there has to be an element of cheating, of course, to achieve the objective] which are quickly followed by drifts of Snowdrops, Crocus, Wild Daffodils and then finally the blue of the Wild Hyacinth.



There are now also Violets, Wood Anemones and Primroses, introduced as the woodland developed. Just perfect. The woodland however is open enough to allow in a fair amount of light and so the grassland is still thriving, although changing in composition. It is an attraction in itself as it begins to flower. But then the trouble starts, and this is one of the hazards. By mid-summer it collapses into a tangled mass, or earlier if dogs or visiting children have already enjoyed running through the mini-jungle and quickened the process. Of course in this state it harbours Voles and all kinds of invertebrates that the resident Hedgehogs search out. However the tangle can be tolerated only for so long and eventually in August it has to be strimmed and raked-off, to enable the whole cycle to start again without decaying vegetation increasing the nutrients in the soil. That then leaves the annual quandary of what to do with all that cut grass?

This problem is compounded in another area where there is an ongoing attempt to develop a true mini-meadow. The area was begging for treatment since it was obvious that it was already fairly diverse, although with nothing outstanding, mostly weeds in any other gardening context, but it needed some sympathetic management such as not introducing the mower until late July. This allows for a wonderful free show of early summer wildflowers and flowering grasses, before it too collapses into a heap that has to be reclaimed with much hard toil. Making hay by hand is really hard work and with the increasingly wet summers it takes ages to dry before it can be removed. Again there is the problem of its disposal - the compost bin is having to take on a new bay by now! Some is used

as a mulch but some still has to go onto the bonfire. The text books don't warn you of this.

An interesting lesson from this area is a false trust in seed packets. At the outset it was planned to enhance the grassland with wild Cowslips. A packet of seed was bought from a highly respectable supplier and rather than scattering it amongst the grass, which rarely if ever works, it was sown in trays and the seedlings then transplanted into pots to provide plugs to be planted into the sward. This proved to be extremely successful, but for the rub. The wild stock that produced the seed had been contaminated with a red gene from an ornamental variety, and so amongst the yellow Cowslips were some red and orange ones. I am sure someone could have done a study on Mendelism but that was not the objective!

Fortunately these red flowering plants do not seem to be fertile and are not as robust as the now ever increasing true Cowslips. As a consequence they are gradually disappearing. Perhaps this is not too worrying in a garden situation, just annoying. Such are the experiences of gardening for wildlife, but what if this was being done on a field scale, to create a flower-rich grassland? With a lot of the wildflower seed now being imported from uncertified sources there is a real risk of this sort of thing happening and what is worse, with damaging consequences to our native flora.

In the orchard the mowing regime is quite different, to get a late summer display of flowers, including clouds of Cow Parsley. The grass is mown every week until July and then things relax to allow the sward to do its stuff. This works well and does not cause the same problem with grass cuttings, because through the season these are used as a mulch around the fruit trees. This cuts down the weeds and conserves moisture, not that this has been a problem in recent years. There is

one hassle, however; moles also enjoy the worms in these enriched areas of ground - an aspect of this kind of gardening that sometimes gets seriously out of hand and has to be dealt with.

The final area has proved to be a total disaster and a rethink will be necessary for this year. It was an area of coarse grass that has been mown continuously from the start and the grass removed. It looked promising. The coarse grasses have now been mown out and it was hoped last year to replicate the orchard by withdrawing the mower in mid-summer. The result was dreadful: long thick grass with not a wildflower in sight, which then took ages to reclaim at a time when there were other priorities. This is not going to be repeated, but another tactic will be adopted, since with the increase in rain the ground is becoming quite boggy - a bonus! As a result a trial introduction of Yellow Flag from the pond is being attempted. If that works can this area now be converted to a wet grassland type through the introductions of suitable plants from the SWT's wonderful Jupiter Garden at Grangemouth? I hope so.

As I said at the start, this article is not about how to create a wildflower meadow but does provide some lessons and warnings about the fad. Of course there are many easier ways of making a garden wildlife-friendly, but if you really want to add this habitat to your plot you must be committed, and there are no short cuts unless you have an impoverished soil. But, that lawn out there may be a meadow in waiting. Have a close look at it and you may be very surprised by the number of herbs that have become established over the years, unless you go in for the bowling green effect. If there are a few, then risk not mowing part of it to allow them to flower, perhaps for the first time ever. I know of a garden where this was done and up popped Orchids! But, always remember if you do this you will have to cut the long grass sometime and you will need to remove it. You may even find that this is fun!

The garden, at Linkylea, by Haddington is normally opened under the National Garden Scheme in June, although not this year [2003].

A NORTH AMERICAN RASPBERRY AT WEST LINTON

On an excursion in 1901 a shrub was seen, which was pretty widely distributed in the locality. The following year the plant was confirmed as *Rubus spectabilis*. "The fruits very similar in size and shape to the common Raspberry of our garden but dark yellow or amber coloured, somewhat astringent, and is said to make excellent tarts. (Has anyone tried them?) The presence of this North American Raspberry. *Rubus spectabilis* is very interesting, and the plant is likely to continue to spread if not interfered with".

..... and in 2002

Salmonberry *Rubus spectabilis* naturalised in policy woodland, spreading and being considered as a troublesome weed!

Lyn Blades

SKULLS

by Elizabeth Farquharson

When out walking in the countryside one frequently comes across a skull from one of our medium sized mammals. It is rare to find the skulls of very small creatures as they are fragile and tend to disintegrate quickly after death. However fragments of these will often be found in fox droppings. The skulls of the medium sized mammals are much stronger and less likely to disintegrate so are more readily found, although the lower jaw is usually missing.

Roadside verges are a common site at which to find cat, dog, rabbit, hare and fox skulls. In areas where otters are plentiful a road casualty may provide a skull, but this would be unlikely in the Lothians.

Away from the roads, dog and cat skulls are less common but rabbit skulls are everywhere, while hare skulls are found much less frequently than formerly, as hare numbers have been falling over the past few years. Badger skulls used to be found outside setts which had been gassed. When they were subsequently re-opened a year or two later spring cleaning of the sett resulted in bones being thrown out. Gassing is now illegal so fewer skulls are found.

Usually there is no need to study a skull in great detail to make an identification. Most have at least one outstanding feature, sometimes two, which enables the finder to label the skull immediately.

Foxes and dogs have rather similar skulls, on the whole long and narrow, but the main characteristic is that the distance from the snout to the back tooth more or less equals the distance from the back tooth to

the back of the skull. I cannot vouch for the skulls of Pekineses or Bulldogs as the proportions may have altered!

Otter skulls have two conspicuous characteristics: firstly the skull is strongly waisted; and secondly the eye tooth is out of line with the other teeth. In mink the eye tooth is only slightly out of line and the skull is not waisted.

Badger skulls are usually no problem. The back tooth is very large and square, and in adults there is also an obvious raised central ridge along the top of the skull. However this central ridge develops slowly during the first year of life and is virtually absent during the first few months, making identification rather more difficult.

Many cats die on the roads every year so their skulls are frequently found. The easiest way to identify them is to look at the underside. Take three points - the tip of the snout, and the widest points of the bones on either side. These make an almost perfect triangle with sides of equal length.

A common question is "How does one tell the difference between a rabbit and a hare skull?" Hares have larger skulls but a sure way of telling the difference is to look at the base: there is a central opening which is of a very different size and shape in the two animals. In the hare it is quite large and wide and will take the tip of your little finger. In the rabbit it is smaller and much narrower and cannot take the tip of your little finger.

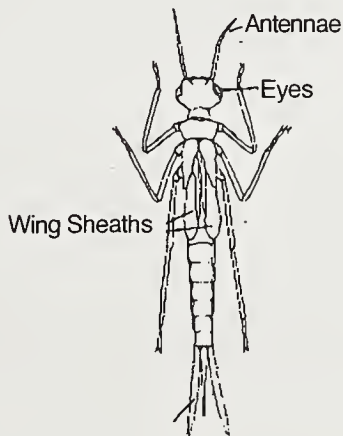
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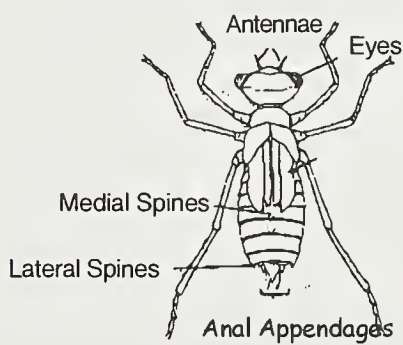
WHO'S FOR POND DIPPING?

IDENTIFYING DRAGONFLY AND DAMSELFLY LARVAE

Dragonflies are most likely to be seen on sunny, windless days. In 2002 conditions were seldom ideal and for most of us, sightings were few. Dragonfly larvae lurking at the bottom of a pond can be fished out in any weather; this is what we did on the Flanders Moss outing. Betty has given us this note opposite to help us identify the larvae we are likely to find.



LARVA of a DAMSELFLY
(but not one of the ones Betty refers to)

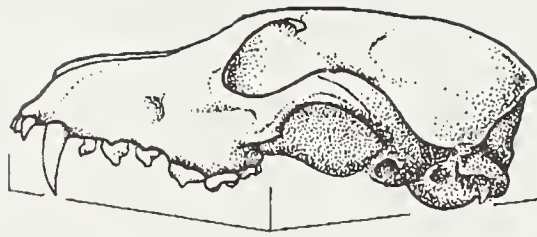
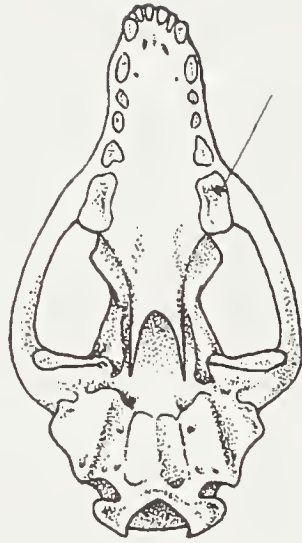


LARVA of BLACK DARTER DRAGONFLY



BADGER

Back tooth large and square; raised central ridge along top...

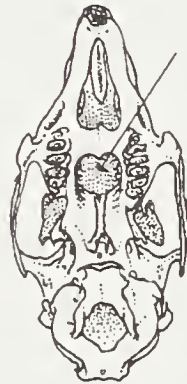
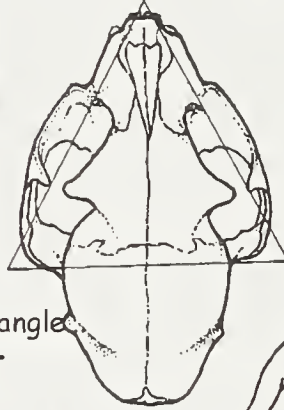


FOX

Distance from snout to back tooth more or less equal to distance from back tooth to back of skull

Perfect triangle

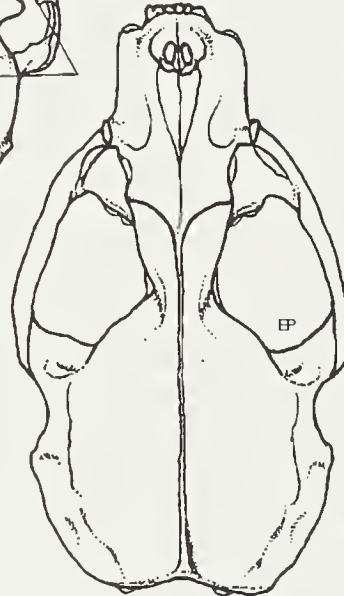
CAT



HARE



RABBIT



OTTER

Strongly waisted; eye teeth out of line

IDENTIFYING DRAGONFLY AND DAMSELFLY LARVAE

Unlike dragonfly larvae, damselfly larvae have up to three delicate, but very obvious, leaf-like or flipper-like anal appendages called lamellae. Some lamellae may be missing due to predation.

The Large Red Damselfly, (so called because there is another British species, albeit a rare one, which occurs in southern England, called the Small Red Damselfly) has a larva or nymph which is stumpy or carrot-shaped in appearance. Each of its lamellae has a dark blotch in the middle.

The Emerald Damselfly has a noticeably hammer-head appearance and looks long and very slender. The base of its labium (lower lip) is very long, reminiscent of the handle of a soup-ladle. Each lamella has three distinct dark, broad, transverse bands.

The Common Hawker Dragonfly larva has a long cylindrical or cigar-shaped body with spine-like anal appendages. Its legs are short, not extending beyond the tip of the abdomen. Apart from the very young, small larvae, the abdomen is characterised by longitudinal, alternate dark and pale bands like candy stripes.

The abdomen of the Black Darter Dragonfly larva is broadest about its middle. It has some very inconspicuous mid-dorsal spines but there is a short lateral spine at each side of segments 8 and 9. (Use a hand lens to see them) The larvae are small. Fully grown larvae are only about 16mm long.

The abdomen of the larva of the 4-spot Chaser Dragonfly is also widest about its middle but its mid-dorsal spines on segments 3 to 8 are quite obvious. Its lateral spines on segments 8 and 9 are short and rather inconspicuous. The tail end of the abdomen is very noticeably tapered to a sharp point. When full grown the larva is about 25.5mm long.

As the odonata larvae grow their wing buds become apparent. When fully developed and ready to emerge the wing buds will reach at least up to segment 4 of the abdomen depending on species. The final cast skin, or exuvia will have the wing buds fully developed, raised and partly separated.

Betty Smith

Rainfall in Corstorphine 2002

Munro Dunn

The rainfall recorded in Corstorphine in 2002, at 944 mm, was the highest of the 37- year period since recording started there in 1966. This comes only 2 years after the previous highest total of 906 mm.

A wet winter and a wet summer contributed to the 2002 record, but the outstanding feature was October's rainfall of 173 mm. making it the wettest month of the 37 years. It is easy to forget that spring 2002 (March - May) was 12% drier than normal, and that over the 31 days before 11th October, when the monsoon started, only 7 mm of rain fell. Indeed, over the 22 days to 1st October only 0.7 mm fell.

December 2001 had been unusually dry but January and February 2002 more than made up for this. The winter's best spell ran from 22nd December to 13th January when only 2.8 mm were recorded. The best spring period ran from 23rd March to 10th April, a run of nearly 3 weeks with no measurable rain at all except for a fall of 6mm on 1st April.

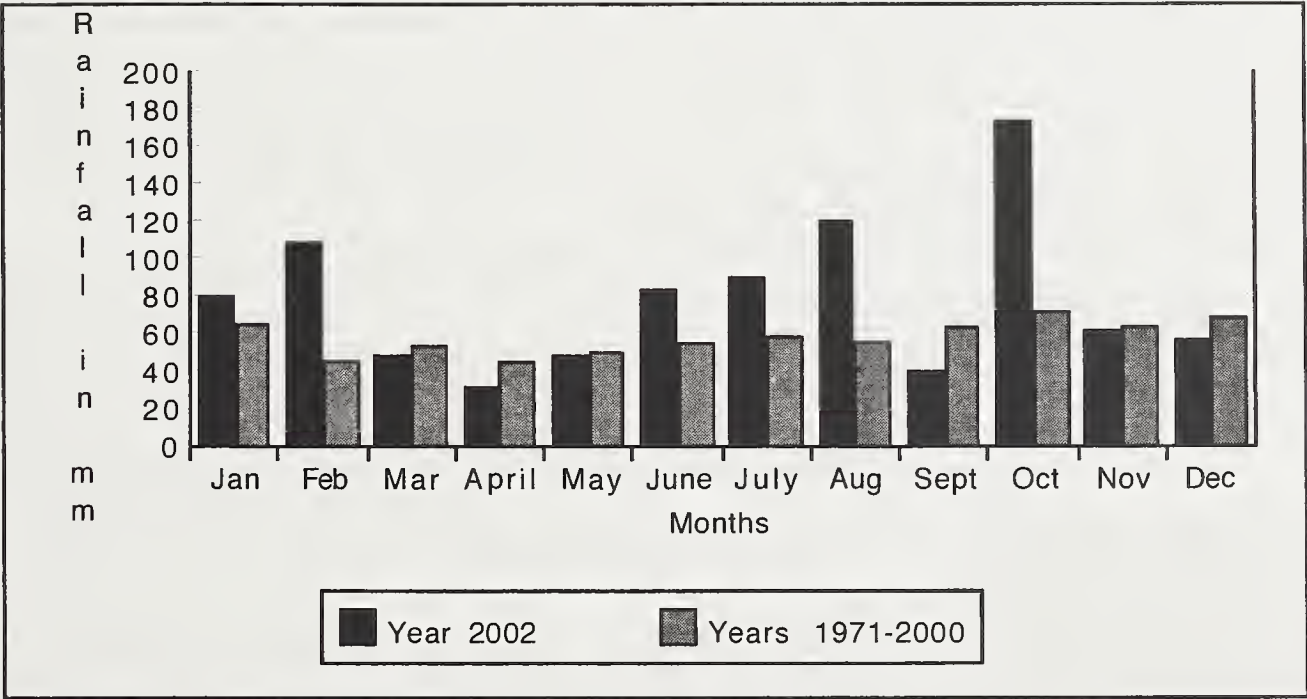
At no point in the summer did it remain dry for longer than 5 days at a time. There were no particularly wet days, but the rain was quite persistent, and falls of between 10 mm and 22 mm occurred 10 times, about as many as might be found over the whole of a dry year.

The very dry spell running from September to October has already been noted. Nearly all of September's 40 mm fell on only 2 days, the 7th and 9th. October's record fall was accounted for by the persistence of rain over the last 3 weeks, together with the year's heaviest falls, 37 mm on the 11th and 44 mm on the 21st. The wet spell persisted until mid-November although eventually that month's total of 62 mm was just below average. December enjoyed a somewhat greater deficit.

Over 2002 there was a significant fall of rain on 205 days as compared with the average frequency of 183. Only one year in the complete record had significantly more days with rain. On the other hand, 2002's 12% more days with rain compares with an excess of total rainfall of 36%. This is consistent with what has been noted earlier in this series: wet years are wet chiefly because of the frequency of heavier falls rather than because rain falls more often.

Comparison of Rainfall in 2002 with Average for 1971-2000

| | Jan | Feb | Mar | April | May | June | July | Aug | Sept | Oct | Nov | Dec | Total |
|-----------------|-----|-----|-----|-------|-----|------|------|-----|------|-----|-----|-----|-------|
| Year 2002 | 80 | 109 | 49 | 32 | 49 | 84 | 90 | 120 | 40 | 173 | 62 | 56 | 944 |
| Years 1971-2000 | 65 | 45 | 53 | 45 | 50 | 55 | 59 | 55 | 64 | 72 | 63 | 68 | 694 |



EXTREMES

Two records having been broken in 2002, readers may be interested to note a few other extreme occurrences.

- 1. The wettest day of the 37-year period was 26th July 1985, when 75 mm fell. Prior to this October the 2 wettest months had been July and September 1985.
- 2. The longest run of consecutive days with measurable rain was 27, from 31st December 1989 to 26th January 1990. Indeed, from 31st December 1989 to 15th March 1990 there were only 3 days without measurable rain.
- 3. 6 consecutive months with at least 50 mm of rain occurred twice, running from August 1982 to January 1983 and from July to December 2000.
- 4. On the other hand, the driest month was February 1993 with only 4 mm.
- 5. The driest 28-day period ran from the 2nd to 29th December 1975, when only 0.6 mm of rain fell.
- 6. The longest run with no measurable rain was 20 days, from 23rd July 1968 to 11th August 1968.

There were 19 consecutive days with no measurable rain from 11th to 29th October 1985, immediately following the wettest 3-month period.

7. The driest year was 1973, with a total of 498 mm. Lest one imagine, however, that dry years are a thing of the distant past, one should recall that the 2nd driest was 1996, with 542 mm.

8. Finally, from July 1972 to April 1973 there was a run of 10 months with no more than 45 mm of rain.

LONG-TERM AVERAGES

The Meteorological Office are in process of moving their 30-year reference period, representing the recent long-term average against which comparisons can be made, to 1971-2000. The reference period in these articles has accordingly been brought forward to cover the same 30 years. This has had the effect of raising the long-term average from 683 mm to 694 mm. This increase, and the increase in average rainfall between the 1st half and the 2nd half of the new 30-year period are a reversal of a downward trend over at least the previous 5 decades indicated by published averages for the Royal Botanic Garden.

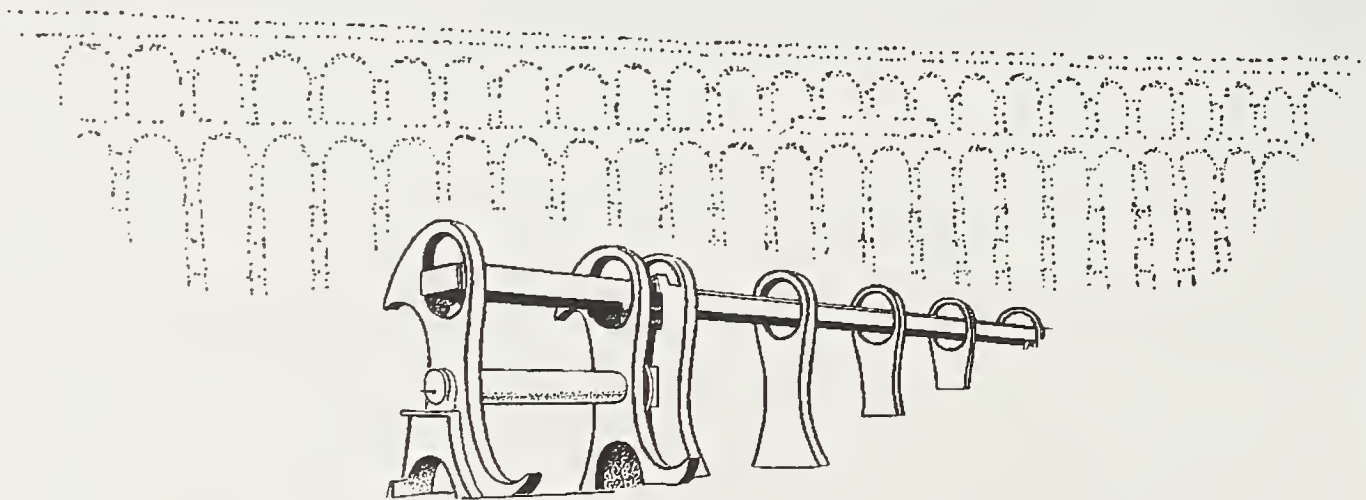


AQUEDUCTS

On a recent visit to Segovia in Spain, I was struck by the contrasting styles of the splendid Roman aqueduct there and the modern aqueduct at Falkirk. The sculptured contours of Falkirk mark a distinct transition from the formal lines of Segovia, a design which remained substantially unchanged until well into the nineteenth century. Witness for instance the arches of the bridge carrying the Union Canal over the road at Inglis Green. The system of bringing water from underground springs to densely populated areas was a major feat of Roman engineering, dating back to the third century BC. Underground and overhead ducts were constructed so as to ensure a steady downward flow towards the town's reservoirs, using only gravity. The aqueduct at Segovia has been variously dated from the early second to the early third century AD.

Built of rough granite blocks without mortar, it consists of 128 arches aligned along its 728 metre length and is 29 metres at its highest point above the ground. Present day links with the Roman world have been maintained at Falkirk with the ducting of the Union Canal through a 145 metre long tunnel beneath the Antonine Wall. The canal runs onto the 20 metre high aqueduct and terminates dramatically in mid-air at the Wheel. It is to the credit of the planners that an innovative design was chosen in favour of more traditional structures. British Waterways are to be congratulated on enhancing the landscape with such a pleasing architectural feature.

MARGARET PERRY



Forth Islands Seabird Counts 2002

This year the weather was not kind to the counters, with rough seas, wind and rain making their task more difficult than usual. Craigleith, for example, took three days to count. The east cliff is counted from a boat, but counting was not easy with rain and a heavy swell (Guillemot and Razorbill blending into the wet rocks; binoculars almost useless as your field of view was one moment on a half counted group of Guillemot and the next either on the sea or sky!). A week later landing was possible but the count was abandoned half way round when the Coastguard advised the boatman to get the counters off the island as a storm was about to blow up. A further week later another landing, and the count was completed! If the counters found the conditions difficult, what must it be like for the birds trying to nest, hatch eggs and then rear chicks successfully?

The conditions are no doubt reflected in some of the figures in the table opposite. On the May Isle there is extensive monitoring throughout the breeding season. This confirmed that all species, other than Shag and Fulmar, had a worse season than in the previous two years, though better than 1999, the year prior to the closure of the fishery. The studies showed that the problems were mainly during incubation rather than lack of food while rearing chicks.

Fulmar: Number of sites up from 1576 to 1635. St Abb's Head NNR reported an increase of 21% and breeding success was good at 0.32 young fledged per active site. May Isle reported their best year since 1995 with breeding success estimated at 0.48 chicks per incubating pair. This is above their long-term average and the highest success since 1995.

Cormorant: Although these were not counted on Craigleith the numbers seem similar to last year.

Shag: Numbers at St Abb's Head NNR were similar to last year and breeding success was good for the third year in succession at 1.6 young fledged per active site, compared to the average for 1990-2001 of 1.21. May Isle reported that, although the number of nests was down by 8%, breeding started earlier than in 2001, and overall breeding success (1.66 chicks per incubated nest) was the highest recorded since intensive monitoring began in 1986.

Great Black-backed Gull: Breeding is confirmed on nine islands giving a total of 33 nests - just two short of last year's all-time high.

Lesser Black-backed Gull: A complete count of 6521 nests was made. A very good count, although it does not exceed the high point of 7207 in 1994.

Herring Gull: A complete Forth Islands count of 9521 nests. This is still only 73% of the last all-islands count which was of 13,025 in 1994.

Kittiwake: All islands were counted giving a total of 5686 nests - an increase of 226. This is still only around half the last highest count of 11,229 in 1997. St Abb's Head NNR reported poor breeding success at 0.33 young fledged per nest (average for 1987-2001 was 0.71). May Isle noted that breeding started earlier this year but the losses during the incubation period were high, resulting in much lower breeding success (0.47 chicks per pair laying) than the long-term average.

Razorbill: Down 17% to 3836 AOS, the biggest decrease being on the May Isle where they also noted big losses during incubation. However of those chicks that hatched, a high percentage survived to fledging.

Guillemot: Down to 30,913 birds. May Isle reported that the number of birds returning to breed was down by 6% compared to the long term average. Here breeding success was also poor at 0.68 young per pair laying.

Puffin: Only a tiny fraction of the estimated over 70,000 birds, thought to be in the Firth of Forth, has been counted.

Other species seen:

* On the islands: Shelduck, Mallard, Peregrine Falcon, Oystercatcher, Curlew, Redshank, Turnstone, Feral Pigeon, Rock Pipit, Linnet, Budgerigar

* During the count trips: Black-throated Diver, Sooty Shearwater, Manx Shearwater, Balearic Shearwater, Common Scoter, Sabine's Gull

* Common Seal, Grey Seal, Rabbit, Garden Tiger Moth (caterpillars), Red Admiral

Thanks to the Forth Seabird Group and its contributors for the figures and comments.

Bill Bruce

And our thanks to Bill Bruce, who always sends us this summary of the Forth Islands Seabird Counts. **Eds.**





SUMMARY of SEA BIRD COUNTS for the FORTH ISLANDS 2002

| | Bass | Craigleith | Lamb | Fidra | Eyebr'ty | Inchkeith | CarrCraig | Inchcolm | Haystick | I'Mickery | I'Garvie | LongCraig | May | Total |
|--|------|------------|---------|--------|----------|-------------|-----------|----------|----------|-----------|----------|-----------|-------|------------|
| | | | | | | | | | | /FRB | | | | |
| Fulmar (AOS) | 33 | 196 | 18 | 206 | 0 | 419 | 0 | 166 | 0 | 37 | 222 | 0 | 338 | 1635 |
| Cormorant (nests) | 0 | x | 101 | 0 | 0 | 102 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 294 |
| Shag (nests) | 25 | 233 | 102 | 186 | 0 | 104 | 9 | 3 | 4 | 52 | 0 | 0 | 676 | 1394 |
| Gannet (nests) | x | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | x |
| Eider (nests) | x | x | 0 | 97 | 13 | x | 2 | 0 | 0 | 196 | 54 | 9 | 673 | 1044 |
| Great B-b Gull (nests) | 1 | 6 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 20 | 33 |
| Lesser B-b Gull (nests) | 1 | 647 | 2 | 79 | 0 | 3276 | 0 | 1221 | 0 | 86 | 11 | 0 | 1198 | 6521 |
| Herring Gull (nests) | 87 | 823 | 82 | 1296 | 2 | 3580 | 48 | 621 | 18 | 371 | 225 | 1 | 2367 | 9521 |
| Kittiwake (nests) | 774 | 383 | 139 | 315 | 0 | 351 | 0 | 58 | 0 | 0 | 0 | 0 | 3666 | 5686 |
| Common Tern (nests) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 55 | 2 | 69 |
| Arctic Tern (nests) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 228 | 228 |
| Roseate Tern (nests) | | | | | | | | | | | | | | 2 |
| Sandwich Tern (nests) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Razorbill(Pairs/sites) | 193 | 141 | 96 | 119 | 0 | 61 | 0 | 11+ | 0 | 0 | 0 | 0 | 3215 | 3836 |
| Guillemot(Brds on cliff) | 2960 | 1558 | 990 | 611 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 24767 | 30913 |
| Puffin (as stated) | 10 | x | 27birds | 222brd | 0 | 1305+ birds | 0 | 58birds | 0 | 40 birds | 0 | 0 | x | 1671 birds |
| AOS=Apparently occupied sites; x=Present but not counted; 0=none breeding; +=Incomplete total; FRB=Forth Rail Bridge | | | | | | | | | | | | | | |



Birds of the Forth Estuary

*Report of talk given by Richard English (ELCRS) to
Edinburgh Natural History Society 25/9/02.*

East Lothian Council owns or manages a number of conservation sites around the county. Whilst these include several inland areas, there can be little doubt that the coastline is East Lothian's best feature. This is reflected in the number and quality of conservation sites found by the sea. John Muir Country Park, Aberlady Bay, Yellowcraig (to name but three) all have high natural history interest, whether floral, faunal or geological.

Amongst all this natural splendour, Levenhall Links can appear somewhat unattractive, even unwelcoming. However, first impressions can be misleading.

Levenhall is an artificial site, having been reclaimed from the sea in the 1960s. Since then it has been used as a disposal site for Pulverised Fuel Ash (PFA) from nearby Cockenzie Power Station. The PFA, mixed with seawater to form a slurry, is pumped into large lagoons. To date, eight lagoons have been constructed but only two remain active. The other six lagoons have been landscaped to provide an area for recreation and amenity. In addition there is an area dedicated to conservation - the Wader Scrapes. Here six shallow pools were created to attract waders and wildfowl, with bird-hides, footpaths and interpretation for human visitors.

The woodlands at Levenhall reflect the artificial nature of the site. They lack the diversity of age and structure found in natural woods, and several non-native species are present. However, the woodlands provide a habitat for invertebrates, which are predated by birds, notably tits and warblers. Nesting species include Willow Warbler, Blackcap and Whitethroat. Reed Bunting traditionally nested in wetlands, but with the widespread drainage of these areas, this species has colonised drier habitats, and several pairs now nest in the younger plantations at Levenhall. During winter, the woodlands provide food and shelter for many birds including Redwing and Fieldfare.

Levenhall's grasslands are very varied. Much of the site is maintained as amenity grassland, but some areas are allowed to develop naturally. A recent development is the creation of a 'wildflower meadow'. This has seen wildflower seeding trials, and changes to the management regime, with the aim of providing an enhanced wildlife habitat and an attractive and interesting area for visitors.

The most important conservation contribution of the grassland is to provide nest sites for Skylark.

Nationally, Skylark numbers have declined dramatically since the 1960s, largely as a result of agricultural intensification. At Levenhall, areas of uncut grass support several pairs of Skylark, and provide food and shelter for wintering birds.

Areas of shorter grass are not without value to wildlife. They provide roosts for wintering waders such as Golden Plover, Lapwing and Curlew. Over winter these areas also accommodate grazing geese and Wigeon. The boating pond is the focal point of recreation at Levenhall. As a result the pond is often too disturbed to attract much wildlife. Over winter, when human activity is less, the area hosts a flock of over 200 Wigeon, as well as a few Tufted Duck and Goldeneye, and the occasional Little Grebe. Recent winters have also seen a Kingfisher feeding at the site.

The seawall at Levenhall provides excellent views across the Firth of Forth. During summer, Terns can be seen feeding offshore. The common species are regularly observed, whilst rarer birds such as Roseate and Royal Terns are occasionally recorded.

The islands offshore are home to nesting Guillemot, Razorbill and Puffin. These birds are pelagic, that is they only come to shore to breed, spending winter at sea. As a result they are more commonly recorded in summer, although individuals may be seen throughout the year. The Forth also hosts various species of wintering Grebe. Great Crested and Slavonian Grebe are seen in good numbers from the sea-wall, usually in winter plumage, but late breeding plumage birds are also recorded. Black-necked and Red-necked Grebe are seen occasionally, although the latter are more common further along the coast towards Gosford Bay.

Levenhall is an ideal site for watching sea-ducks including Eider, Goldeneye and Velvet Scoter. Surf Scoter, an American vagrant, is recorded annually. The star-turn is probably the Long-tailed Duck. These winter in the Forth having migrated from their Arctic breeding grounds. Ducks, being a bit odd, tend to mate over winter, and so the birds seen from Levenhall will be in full breeding plumage.

The sea-wall can also be good for migrant passerines, including flocks of pipits and wagtails, as well as individuals of Wheatear and Snow Bunting.

The active ash lagoons, whilst not visually pleasing, form an excellent habitat for birds. The lagoons, particularly the one near the mouth of the Esk, form

large, flat expanses of ash with standing water. As such they are ideal high tide roosts for waders, gulls and terns, often attracting thousands of birds.

Wader numbers tend to peak in late summer/autumn, when birds arriving to winter at the site are supplemented by others on migration. At this time the western lagoon can host over 2000 Oystercatcher, several hundred Knot, Bar-tailed Godwit, Curlew, Redshank and Golden Plover, and smaller numbers of Turnstone and Ringed Plover.

Occasionally the ash lagoons attract genuine rarities. Several years ago the site was visited by a Western Sandpiper, an American vagrant. Such rare birds produce massive interest, and visitors flocked to the site. Whilst this interest is very welcome, and undoubtedly raises the profile and reputation of Levenhall, it is important to stress that, from a conservation perspective, common species are far more important. Levenhall provides habitats for substantial populations of these species, and thus makes a significant contribution to their continuing survival.

Surprisingly, ash can provide a habitat for Sand Martins. For the last two summers Sand Martins have excavated nest holes within ash stockpiles on the site. Scottish Power have now set aside a pile of ash specifically for the Martins' use, and hopefully the birds will continue to nest here for many years.

The final habitat at Levenhall can perhaps be described as the 'Jewel in the Crown'. This is the Bird Reserve or Wader Scrapes. The site regularly hosts good numbers of common waders, including a large autumn/winter flock of Lapwing. This is a species which has suffered population decline in recent decades. Whilst Levenhall does not have a breeding population of Lapwing, it can provide valuable wintering grounds for these birds.

The scrapes are renowned for attracting uncommon migrant waders. Species recorded annually include Ruff, Little Ringed Plover, Curlew Sandpiper, Little and Temminck's Stint, Spotted Redshank, Green and Wood Sandpipers.

However, the scrapes are not just about waders. The area is also popular with wildfowl. Over the winter the pools are regularly visited by Teal and Wigeon. In summer, Garganey are recorded annually. These are unusual for ducks in that they are summer visitors to Britain, wintering in the Mediterranean. Shelduck also visit, and can be seen throughout the year.

Perhaps the real value of the area is as an educational and recreational resource. It allows close-up views of a variety of waders (in all sorts of plumages) in relative comfort. As such it is an ideal site for anyone, novice or expert, interested in birds.

So, what of the future for Levenhall? To date the site has been a huge success, combining conservation, recreation and education. There are plans to develop parts of the site, for example by extending the nearby golf course. However, the Wader Scrapes and western ash lagoon should be safe from any such development. These areas, in recognition of their conservation value have been classified as Sites of Special Scientific Interest, and both were included in the Firth of Forth Special Protection Area and Ramsar Site designations.

It is to be hoped, therefore, that Levenhall Links can continue in its present role of providing local people with recreational and educational opportunities, whilst also fulfilling a vital role in nature conservation.

A PECULIARITY OF THE MAGPIE (THE 1902 VIEW)

The Magpie is an interesting bird, and in very considerable numbers breeds around Edinburgh. While a good many make their nests at Craigmillar, I generally destroy most of them, as I should be sorry to see them increase in numbers. They are merciless tyrants among the nests of the other birds, robbing the eggs and destroying the young.

.....There seems to be a register of unmarried Magpies somewhere, as no sooner is one shot than within a day or two another male is secured and domestic arrangements go on as before.

GOOD NEWS ABOUT PUFFINS in 2002

Once upon a time there were so many Puffins on Ailsa Craig on the Firth of Clyde that they 'caused a bewildering darkness' when they flew overhead. None have bred for the last fifty years because of the Brown Rat population. In the last ten years the University of Glasgow has been involved in a project to eradicate the rats. The project has been successful and the Puffins are back. They bred on the island for the first time again this year.

PHENOLOGY AT THE BOTANICS

by Geoffrey Harper

You have all heard about 'phenology', haven't you? But what does it mean? If you look up its etymology, you're none the wiser - 'the study of phenomena'. That could mean study of life, the universe and everything, but somehow, through the centuries, it has been narrowed down to the study of seasonal events.

Such studies are becoming all the rage because of the threat of climate change. That alone is a good enough reason for the Royal Botanic Garden to join in. Discussions about setting up a project began in late 2001, at the prompting of Prof. Roy Thompson of the University's Department of Geology & Geophysics. He had already been analysing our historical records from 1850-95, published in the Transactions of the Botanical Society. During that period up to forty species were recorded annually in the Garden for the date of first flowering (first-flowering date, FFD). The Garden also has excellent records for many more species from the first half of the 20th century, although monitoring was mostly carried out at weekly or less frequent intervals. According to Roy's analysis most of these FFDs show significant correlation with mean monthly temperature for one or more months prior to flowering; so any trend in FFD could act as an indicator of climate change. The old Inverleith records are also proving to be invaluable in helping to predict the changes to plant growth and development that will come about as global warming inexorably increases in the coming decades.

In view of the new interest in climate change and its impacts, Roy was keen to see observations resumed at the Botanics - especially since we also make meteorological observations on site. At last the project has got off the ground - or, put another way, restarted - in 2002. As I write, in late November, there remains just one more observation (on a Lauristinus *Viburnum tinus* bush behind the plant-houses) to complete the results for 2002.

A number of European botanic gardens have also recently begun phenological studies. At Kew, for example, one hundred species are being monitored (the 'Kew 100') and one specimen of each species is checked every two days. At Inverleith we are being more ambitious, perhaps too ambitious.

The number of species is also a hundred, but we are checking them daily near their first flowering times, and using 1-6 specimens or patches of each species. As many species as possible - about thirty - are the same as those first recorded daily in the 19th century at Inverleith. Others have been studied by Richard and Alastair Fitter over several decades in England, or are among the Kew 100, or are being monitored by Prof.

Fred Last in his garden at Longniddry, or are included in the UK Phenology Network, or are of particular interest to the Botanics staff (e.g. Rhododendrons).

Many other phenological studies are demonstrating earlier flowering times - or earlier spawning by frogs, or earlier arrival of migrant birds - using historical and/or recent records. This is normally put down to climate change. That may well be true. However, that is not the be all and end all of phenology: there is so much more to find out! At the Botanics we are keen to discover something about plants, as well as about the weather. Just now, we are still at the stage of designing the project to cater for this wider range of interests.

For instance, why did we decide to monitor on average three specimens or patches of each species? Well, partly it is for security, in case one plant or patch has to be moved during redevelopment of the Garden, or is destroyed accidentally - a tree fell on some of the plants in February 2002! Scientifically, on the other hand, the intention is to set up 'mini-populations' of some plants. In the case of trees and shrubs we are collecting individual observations from each plant, and on the basis of these we calculate an average FFD and an absolute FFD (i.e. the earliest date in the mini-population). We can then analyse each plant separately, representing 'individual phenology', and also the two calculated values, which come under the heading of 'population phenology'. Time will tell which measurements give the best correlation, if any, with the weather.

We believe the monitoring of individual plants of known provenance is an important initiative, since most other studies deal just with population phenology on a large scale, using measurements from genetically different individuals spread over a wide area. Think of the complexity of trying to explain changes in first-arrival date of, say, Chiffchaff. It is not only that different birds are involved each year, but if climate has anything to do with their arrival here, is it the weather in Africa, the Med, Northern Europe or Britain; or all of them at different stages of the migration?

By studying the behaviour of individual organisms - such as the single apple tree *Malus sieboldii* on which more detailed observations are being made in the Garden - we hope to gain some insight into what determines their flowering and other phenological behaviour. Any conclusions we reach may help explain the findings of population phenology. We might also learn more about how to help our plants, including crops, cope with climate change.

One thing that excites me about the project is that this is real science being done with little more than a pencil and notebook. It is something of course which British naturalists have long been famous for - even if out of fashion among professional biologists. Now the science is more than just an agreeable pastime: it is fulfilling the urgent need to understand how the biosphere works before humanity ruins its own environment on a global scale.

With its vast collection of plants, well cared for, and in a compact space, the Botanics is the ideal site to undertake this ambitious long-term programme of observations.

To be successful the Botanics project will have to continue the monitoring for many years, and for this we shall need a few really dedicated volunteer observers. While opportunities to participate in the Botanics project are limited, there are many observations that any individuals can make, even in their garden at home.

Have you thought of taking part in the UK Phenology Network? They are collecting observations as diverse as date of budburst and the last day in the year on which your lawn is cut. You can contact them at The Woodland Trust, Autumn Park, Grantham, Lincolnshire NG31 6LL; Phone 0800 026 9650; e-mail phenology@woodland-trust.org.uk; website www.phenology.org.uk.

News From Holyrood Park Ranger Service

View Edinburgh from any angle and you can't help but notice the dominance of the Arthur's Seat volcano over the city; the story of the volcano and its influence over the formation and development of Edinburgh begins over 350 million years ago, but that is a story for another day. Today, we see the remains of the once mighty volcano surrounded by Holyrood Park, land that was enclosed as a Royal Park in 1541 by King James IV. There are few cities that can boast a 650 acre greenspace at their centre, let alone one designated as both a Site of Special Scientific Interest for its geology and wildlife, and a Scheduled Ancient Monument because of archaeology dating back to mesolithic times.

Holyrood Park is owned by the Crown and is managed on its behalf by Historic Scotland, who established a Ranger Service both to protect and to promote understanding of the Park. In the four years that the Ranger Service has been in existence, much effort has gone into developing our education, interpretation and conservation work, and our links with the local community. This year we were lucky enough to get a new, purpose-built Education Centre, sited behind the Palace, at the back of the parade ground, on the site of the old sports pavilion.

The new centre will allow us to make great improvements to the educational programme that we offer to schools and other interest groups. The centre has a big classroom, a smaller classroom and a wet-room equipped with basic lab apparatus; these new facilities mean that we can continue to improve our current programme of structured activities and self-led trails, all of which are linked to the 5-14 curricular guidelines. All the activities are designed with plenty of 'hands-on' experience, with children encouraged to discover and investigate the environment for themselves.

The Centre also has office space that provides a new home for the Rangers and the Royal Parks Constabulary. It is the starting point for the wide range of events and guided walks that are organised by the Ranger Service, a base for the survey work that we undertake in the Park, and is used for various training sessions that we offer. The Centre can be made available for use by other groups and organisations.

As a special event this summer, the Ranger Service has linked with the Edinburgh Natural History Society to offer members the chance to get involved with some of the Edinburgh Biodiversity Action Plan survey work that is being undertaken in the Park. On Monday 16 June 2003, as part of an on-going monitoring programme, there will be a special day of surveying for the Adder's Tongue Fern in Hunter's Bog. Any members interested in taking part in this event, or who would like any further information on the work of the Ranger Service or our programme of events and guided walks for 2003, please contact us either by phone - 0131 652 8150 - or by emailing us on hs.rangers@scotland.gov.uk

Natalie Taylor

Some forthcoming events at HOLYROOD PARK

| | | |
|---------------|-----------------------------|--|
| March 23 | Arthur's Story | What is Arthur's Seat? Where did it come from? Who shaped its landscape? Join a Ranger to discover more. |
| April 20 & 21 | Great Easter Eggstravaganza | Join our Easter activities and trail, bring the family. |
| April 30 | Story of Beltane | A family event to find out more about this ancient festival. |
| May 24 | Birds for Beginners | Join the Rangers to learn the basics of bird ID. |
| May 25 | Up with the Larks | Join a Ranger to enjoy the magical dawn chorus at Holyrood Park. |

A Trip to Skye 30 July - 4 August, 2002

The following is an edited account of a Wild Flower Society trip to Skye, organised by one of our members, Carol Hawkins, and her husband Bill - to which NATS members were invited. The Wild Flower Society had last visited Skye in 1975, and though the sites visited were not identical the native plant lists are very similar.

Broadford was the base, and on the first day the party made for nearby Ben Suardal, where the rock is limestone overlaid with peat, so the first plants noted were those of acid moorland: Flea Sedge *Carex pulicaris*, Star Sedge *C. echinata*, and Viviparous Sheep's Fescue *Festuca vivipara*. Wet flushes contained Common Butterwort *Pinguicula vulgaris*, Pale Butterwort *P. lusitanica*, and the lime-lovers Lesser Clubmoss *Selaginella selaginoides* and Yellow Saxifrage *Saxifraga aizoides*. At higher levels the party found Mountain Everlasting *Antennaria dioica* and Creeping Willow *Salix repens*, before scrambling onto a limestone outcrop with the beautiful Mountain Avens *Dryas octopetala*. By now it was raining so no-one wanted to linger at Loch Lanachan, but after the rain eased some time was spent on limestone pavements where Herb Paris *Paris quadrifolia* and Stone Bramble *Rubus saxatilis* were discovered fruiting in the grykes.

On the second day the goal was the Old Man of Storr, with sunny skies, spectacular scenery, and more alpenes. Northern Rockcress *Arabis petraea*, Moss Campion *Silene acaulis*, Mountain Sorrel *Oxyria digyna* and Alpine Saxifrage *Saxifraga nivalis* were in flower, while Mossy Saxifrage *Saxifraga hypnoides*, Sibbaldia *Sibbaldia procumbens* and Alpine Meadow-rue *Thalictrum alpinum* could be identified by their distinctive leaves. But the botanical highlight of the Storr was the tiny Iceland Purslane *Koenigia islandica*. A stop at Loch nan Eilean added Pipewort *Eriocaulon aquaticum*, Awlwort *Subularia aquatica*, Lesser Bladderwort *Utricularia minor* and White Water-lily *Nymphaea alba* to the list.

Day 3 took the party to the Quiraing with more magnificent scenery and interesting plants. The two montane Willowherbs - Chickweed Willowherb *Epilobium alsinifolium* and Alpine Willowherb *E. anagallidifolium* were growing in rocky burns with Moonwort *Botrychium lunaria*, and the "Green Hawkweed" *Hieracium chloranthum* on a nearby ledge. After lunch some of the party went higher to the naturally enclosed area known as The Prison, and higher still to The Table for more magnificent views and plants.

A trip to Raasay on day 4 produced views across to Applecross and a number of new plants. Two oceanic ferns: Hay-scented Buckler Fern *Dryopteris aemula* and the moss-like Wilson's Filmy Fern *Hymenophyllum wilsonii*, were found in a small birchwood, along with an uncomfortable number of midges. Various lochans produced new water plants including the Floating Clubrush *Eleogiton fluitans*, while Heath Cudweed *Gnaphalium sylvaticum* was found in Raasay Forest.

On the last day the skies were grey again and most of the party pottered on the west coast taking in Camas Malag, Elgol, Kilmarie and Torrin. The most interesting finds of the day were Early Orache *Atriplex praecox*, on the seashore at Kilmarie and a variety of alpenes at sea level near Torrin, presumably washed down from Sgurr nan Each.

Jackie Muscott from the report by Bill Hawkins

Another expedition is planned for Breadalbane on 21-25 July, 2003, and members of the Natural History Society are again invited. Contact Bill and Carol Hawkins, 23 Ferndale Crescent, Cowley, Uxbridge, UB8 2AX.

ICELAND PURSLANE

Warwick University has been monitoring this little plant, one of the rarest in Britain. It went into sharp decline in the 1990s, when springs were warmer. Then two cold winters encouraged a record count of 7000 plants. However last year only 1500 were recorded. If global warming continues Iceland Purslane will disappear from Scotland, its most southerly outpost.

From information in *The Times* in February, 2003

Plant Life in Edinburgh and the Lothians - 20 years in the making

On 25 November there was a grand reunion of some of the people who did plant surveys for the *Botany of the Lothians* Project. They had gathered to see the project finally come to fruition with the publication of a large and handsome volume *Plant Life in Edinburgh and the Lothians*.

The project was launched in 1982 by the Botanical Society of Edinburgh (now the Botanical Society of Scotland), and it was an ambitious one. The whole of the Lothians was to be sampled (one kilometre square in every four) not just the known 'hot spots'; as many people as possible were to be involved and it might take 10 years or more. Well, it took rather longer than expected, but it certainly involved a lot of people and it was a pleasure to see so many of them at the launch.

The initial stages went quite well, but a mopping-up operation was required once the more accessible squares had been dealt with, and I had some very enjoyable summers in the early 1990s tramping over the less-explored parts of the Lothians. According to Murphy's Law the more inaccessible the place the more often you will have to visit it, and there is one remote square in the Lammermuirs that I thought I would never be finished with. First I had to go back to collect a decent specimen of Chickweed Willowherb *Epilobium alsinifolium*, new to the Lothians. Then I realised I had probably misidentified a sedge (I had) and I had to go back again.

Meantime there was a bit of a hiatus over getting the mass of data onto the computer, botanists being less than enthusiastic about spending hours at a keyboard. Scottish Natural Heritage came to the rescue funding the Edinburgh Records Centre to do the work. Finally came the labour of producing text, maps, pictures etc. and raising enough finance to ensure publication. Somehow Pat Cochrane kept everything together and more or less on schedule, and the first hundred books arrived just in time for the launch.

The book is more than just a record of flowering plants and ferns. It includes a complete moss flora and information on stoneworts, seaweeds, lichens and fungi, large and small, not to mention sections on fossil plants, climate, geology, soils and land use, etc., etc. Not bad for £25 (£20 to ENHS members, in recognition of the £2000 grant we made towards publication costs). Published by Edinburgh University Press.

Jackie Muscott

New Atlas of the British and Irish Flora

An Atlas of the Vascular Plants of Britain, Ireland and the Isle of Man and the Channel Islands

(EDITED BY C.D. PRESTON, D.A. PEARMAN and T.D. DINES ; OUP)

In 1992 it was agreed that the Botanical Society of the British Isles should undertake a comprehensive survey of the British and Irish Flora in order to produce a publication to replace the existing *Atlas of British Flora* (1962). In 2002 the new Atlas was published. In it, historical records and recent records for the whole of Britain and Ireland are summarised in the form of 10-kilometre distribution maps. Maps and text for 2412 flowering plants are included.

The production of this book has been an enormous undertaking. Great credit is due to those who gave so much of their time and effort towards its completion. It is a handsome volume, printed in colour on high quality glossy paper. The dots on the map are blue for native plants and red for aliens, with the shade varying according to the age of the record. This is a big improvement on black and white. The introductory chapters make interesting reading, and the maps and commentaries provide an enormous amount of information for study.

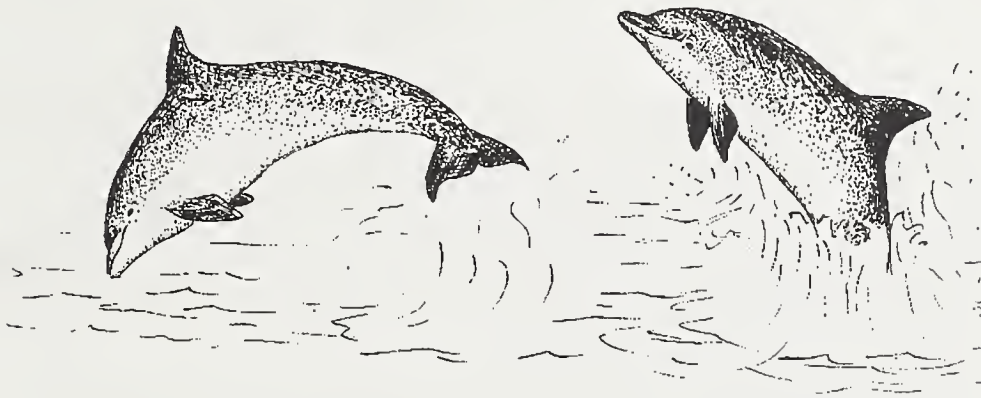
The only drawback this volume has is perhaps its weight - 10lbs compared with 4lbs for the 1962 Atlas. On the other hand it could be an advantage; when not in use for its recognised purposes it will be splendid for pressing plant material!

Lyn Blades



Chickweed Willowherb
Epilobium alsinifolium

Was it a Whale? A handy guide to the Marine Mammals of the Hebrides
by Jay Butler and Anna Levin. Published by Brown and Whittaker 1999 £2.95



This little guide is excellent. It describes twelve different species of marine mammals: Dolphins, Porpoises, Whales, Seals, Otter and Mink. It is enlivened with simple illustrations and concise user-friendly text. I quote from the forward:

Jay Butler and Anna Levin put together this guide to the most common species to be seen in these waters. Jay Butler, after taking a degree in Neurobiology at the University of Sussex, was awarded her Ph.D. for behavioural studies on Badgers, after which she worked on the IFAW's research vessel Song of the Whale in the Azores and became, as she says "completely fascinated by cetacean biology and never looked back!" Anna Levin whose degree in Social Anthropology from Edinburgh University led to an interest in the interactions between cetaceans and humans, travelled halfway round the world to look at whales and study whale-related tourism. Her passion for whales and dolphins took her to Ireland, the former Yugoslavia and New Zealand and the drawings in this book are a tribute to the acuteness of her observations.

Anna Levin, who lives in North Berwick and often assists Erich Hoyt with his Whale Workshops, says she and Jay Butler met when working for the Hebridean and Dolphin Trust on the Isle of Mull.

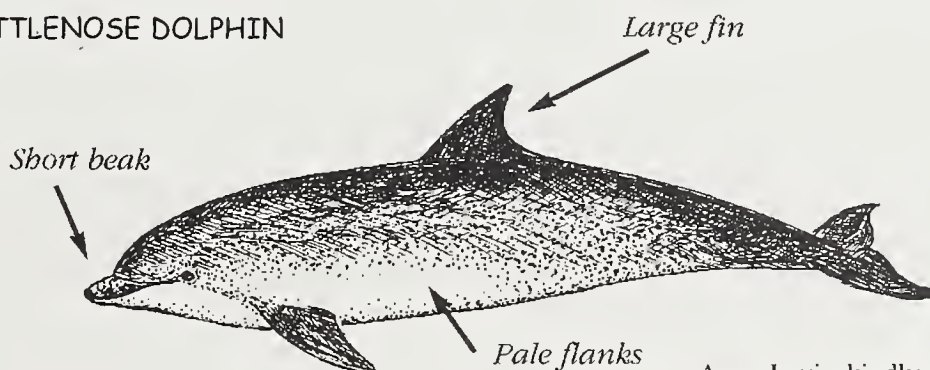
We had established a small exhibition centre on Tobermory's Main Street and the idea for this book came about partly as a response to the large amount of enquiries we received there. People would come into the centre from their yachts or off the ferry and ask questions such as: I saw a dark fin off the coast of Ardnamurchan - what was it?" We would take them through various questions to glean some more information before we could guess at an answer. What was it doing? Was it close to the shore? How did it behave around the boat?

We had plenty of ID guides in the centre, but many of them showed cetaceans from all over the world - it's not much use flicking through pictures of Yangtze river Dolphins and Grey Whale tail flukes when you're trying to identify a fin in the Minch. We realized that there was a need for a local book, small and handy enough to have in your pocket, that would detail only the species you were likely to see around the Hebrides. Also, many ID guides just showed pictures of the whole whale - something you rarely see unless it's beached. We wanted to include pictures of what you're likely to see - the splashes and high-spirited leaps of a pod of common Dolphins, or the smooth dark back and small fin of a Minke Whale. Most of all, we wanted to encourage people to keep their eyes open when in Hebridean waters and draw their attention to the amazing variety of cetaceans that can be seen right here off the coast of Scotland.

You could not do better than take Jay and Anna with you on a Whale-watching trip, if not in person, at least in the form of this little book. Anna is a volunteer at the Seabird Centre, where this book is on sale.

Mary Tebble

THIS IS A BOTTLENOSE DOLPHIN



Anna Levin kindly gave us permission to reproduce drawings from the book. Eds

Observations 2002

JANUARY

| | | |
|-------|--|----------------|
| 01/01 | A lovely pink sunrise on scattered clouds on a crisp, sparkling morning of white frost and sunshine. Great Grey Shrike at Fannyside, near Slamannan. Red-crested Pochard at Linlithgow Loch. | MR BC BC |
| 06/01 | Snow Goose at Gullane. 3 Redwings at Swanston. | BC NT |
| 13/01 | Peacock Butterfly, Salisbury Crags. | NT |
| 14/01 | Redwing in garden, Davidson's Mains. | ES |
| 17/01 | 2 Fieldfares, Swanston. | NT |
| 20/01 | Bawsinch Open Day - 1 pair Pochard; 10 Tufted Duck; 1 pair Goldeneye; 1 drake Goosander. 4 Fieldfares are regular visitors to fallen apples in a Blackhall garden. | CR MR |
| 21/01 | Temperature in Edinburgh 13C; unseasonably warm. | MR |
| 28/01 | Great Northern Diver at Largo Bay. Hurricane force winds and rain across Scotland. A huge marquee complex at Hopetoun House collapsed. | BC MR |



Weather for January

A quiet, dry start with a very mild period in the middle of the month, followed by a stormy finish with very strong Westerly gales and heavy rainfall in which the Bridges were closed to traffic. Rainfall was reported to be 1.5 times the average.

MR

FEBRUARY

| | | |
|--------------|--|----------|
| 01 and 02/02 | Storm force winds and rain again but less severe. | MR |
| 13/02 | 2 pairs Goosander, a Little Grebe and a few Goldeneye at Cramond. Birds are beginning to sing. | MR |
| 28/02 | 1 drake Red-breasted Merganser at Bawsinch. On 13th February the weather men reported that we had had 40 days of rain and wind. | CR MR |

MARCH

| | | |
|-------|---|----------------------|
| 01/03 | A 7-spot Ladybird on Saxifrage in garden. Sparrowhawk at Swanston. | MR NT |
| 02/03 | Pintail at Tynninghame. | BC |
| 03/03 | Celandine and Coltsfoot in flower at Newhailes. 2 Whooper Swans, 1 Red-breasted Merganser (f), Bavelaw Marsh. | MR NT |
| 04/03 | 5 eggs abandoned by Robins who had nested in the hollow of an old Rowan tree. Great Tits, Blue Tits, Wrens were also nesting in different parts of the garden. Coal tits were investigating bird boxes and a Thrush was visiting, Davidson's Mains. | ES |
| 09/03 | Long-eared Owl at Aberlady. 2 Goldfinch on nut feeder in Blackhall garden. | BC MR |
| 12/03 | Queen Bumble bee <i>Aonibus leucorum</i> in Blackhall garden. | MR |
| 13/03 | Orange Ladybirds <i>Halyzia 16-guttata</i> on Sycamore at Yellowcraig: cream spots on orange ground, as found in May 2001. | MR |
| 16/03 | Kingfisher, Duddingston Loch. | NT |
| 19/03 | Sparrowhawk sitting motionless in Rowan behind bird feeders (5.30pm), then flipped over the hedge to alight in bush near neighbour's feeding station. Subsequently it killed 3 Collared Doves, the last in October, 2002. Tree Creepers in Birch tree, garden at Davidson's Mains. | MR ES |
| 20/03 | 1 Grey Heron in the Chinese Garden, Royal Botanic Garden. | CR |
| 26/03 | Small Tortoiseshell Butterfly at Bawsinch. Peacock and Tortoiseshell Butterflies in Blackhall garden. A Peacock Butterfly <i>Nymphalis io</i> at Blackness. A Peacock Butterfly in garden, Davidson's Mains. | CR MR CS ES |
| 28/03 | 1 Peacock and 2 Tortoiseshell Butterflies at St. Boswells. | LB |
| 30/03 | A patch of White Violets <i>Viola odorata</i> about 2.1 metres at Crichton. Easter Saturday : a Chiffchaff and a pair of Grey Wagtails at Cramond. 2 Tortoiseshell Butterflies at Gifford. | EH, CS MR LB |

APRIL

| | | |
|-------|--|----|
| 03/04 | 1 Grey Heron in the Chinese Garden, Royal Botanic Garden again. | CR |
| 06/04 | 3 Tortoiseshell and 4 Peacock Butterflies at Musselburgh; NATS Outing. | LB |
| 07/04 | Several Chiffchaff singing at Hopetoun. | MR |
| | 3 Tortoiseshells and 1 Peacock at Fala. | LB |
| 09/04 | 2 Peacock Butterflies at Bawsinch. | CR |
| 14/04 | 3 singing Blackcaps at Hopetoun. | MR |
| 20/04 | 20 Waxwings, Lanark Road. | BC |
| | <i>Mitrophora semilibera</i> appeared again at the same site on the Ravelston Walkway . | EF |
| 21/04 | Pair of Garganey at Aberlady. | BC |
| 22/04 | Very large numbers of <i>Morchella elata</i> on shredded wood, spread thickly around rose bushes in the Corstorphine Hill Walled Garden. | EF |
| 25/04 | Redstart perched briefly on a low wall within a few feet of the house, D Mains. | ES |
| 27/04 | Willow Warbler, Chiffchaff and Garden Warbler at Royal Botanic Garden. | MR |

MAY

| | | |
|-------|--|------|
| 11/05 | Female Kentish Plover, Aberlady. | BC |
| | 2 Little Egrets at Aberlady. | BC |
| 17/05 | Swift screaming over Blackhall. | MR |
| | 4 Spoonbills at Tynninghame. | BC |
| 18/05 | At Newton Don, <i>Veronica peregrina</i> , the American Speedwell found near the stable. | NATS |
| 25/05 | Spoonbill at Tynninghame. | NATS |
| | Roble Beech <i>Nothofagus obliqua</i> found at Tynninghame in a young plantation. On a young <i>Quercus robur</i> , I found Oak Apples <i>Biorhiza pallida</i> and the rarer Cotton Wool Gall <i>Andricus quercusramuli</i> . Both are caused by Gall Wasps. | MR |

JUNE

| | | |
|-------|---|----|
| 01/06 | Inchcailloch - NATS outing : Chicken of the Woods fungus <i>Laetiporus sulphureus</i> found on a small 'beaten up' Oak. Above this, from a hole in the trunk, we heard nestlings cheeping, but they were not identified as the adult birds were not seen. | MR |
| 03/06 | Avocet at Musselburgh. | BC |
| 06/06 | Warm, sunny afternoon, Painted Lady Butterfly in Blackhall garden; seen several times in the next few days. | MR |
| 08/06 | Rustic Bunting at Thorntonloch. | BC |
| 09/06 | Marsh Warbler at Barns Ness. | BC |
| 15/06 | Osprey at Tynninghame. | BC |
| 16/06 | 4 Rose-coloured Starlings at Gullane. | BC |
| 19/06 | <i>Hapalopilus nidulans</i> , a dark pink fungus with the texture of a soft sponge, was found on a fallen branch near the Binns on the NATS mid-week outing. When found elsewhere, later in the year the older slim, horizontal brackets were pale pink and quite firm. | ES |
| 20/06 | Large Red Damselfly at Swanston. | NT |
| 21/06 | A pair of Bullfinches on bird feeder containing Sunflower seeds. New visitors to the feeding station in a Blackhall garden. | MR |
| 23/06 | Common Blue Damselfly, Duddingston. | NT |
| 24/06 | Reappearance several yards from previous site in 2000, of Ploughman's Spikenard <i>Inula conyzae</i> , two years after its first appearance in garden, Davidson Mains. | ES |
| 25/06 | Whitethroat (male, singing), Hunter's Bog, Holyrood Park. | NT |
| 27/06 | Lesser Whitethroat, Holyrood Park. | NT |
| 28/06 | Grasshopper Warbler, Hunter's Bog, Holyrood Park. | NT |
| 29/06 | Little Gull at Musselburgh. | BC |

JULY

| | | |
|-------|---|--------|
| 01/07 | A 30-tonne Sperm Whale carcass washed up on the shore at Society near Hopetoun, South Queensferry. | MR |
| 13/07 | Wood Vetch <i>Vicia sylvatica</i> was the star find on an outing to Woodhall Dean, East Lothian | MR |
| 17/07 | Haresfoot Clover spotted at the edge of beach opposite Seton Sands Holiday. | ChR |
| 22/07 | A strong group of plants of Elecampane <i>Inula helenium</i> at South Queensferry, under the bridge. Joe Carlyle showed them to me 30 years ago!! (Recorded in August 1962 by Betty Beattie, Jackie Muscott) | EH, CS |
| 23/07 | In excess of 80 Common Spotted Orchid <i>Dactylorhiza fuchsii</i> in the south-east corner of Davidson's Mains Park. | ES |
| 25/07 | Another good plant of Elecampane <i>Inula helenium</i> near Prestonhall. | EH, CS |

| | | |
|-------|---|----|
| 28/07 | At least 40 Broad-leaved Helleborine <i>Epipactus helleborine</i> in the south-east corner of D Mains Park. At least 30 different species of wild flowers appeared in an area of the north-west of the park, which was previously meadow grass, but had recently been disturbed by digging for work on a new water main. Earlier Ragged Robin <i>Lynchnis flos-cuculi</i> and Lady's Smock <i>Cardamine pratensis</i> appeared this year, in an area of grassland, which remained uncut, because of a small copse of newly-planted trees. | ES |
|-------|---|----|

WEATHER for June and July

I am reminded of the satirical 'Song of the Weather' by Michael Flanders and Donald Swann, quote:

*In June it rains and never stops
Thirty days and spoils the crops.
In July the sun is hot
Is shining? No, it's not!*

We certainly had a very soggy summer, with wet weather from May onwards. June was miserable and July was the wettest in Edinburgh since 1931 according to the weather girls. On Friday 19th July, rain storms and high winds at Muirfield wrecked the Open championship Golf. Tiger Woods had a round of 82! Towards the end of the month, conditions brought much of Scotland to a halt, with landslides, flooding and disrupted road and rail services. MR

AUGUST

| | | |
|----------|--|----------|
| 10/08 | NATS outing to Falkirk Wheel - Arrowhead <i>Sagittaria sagittifolia</i> seen in flower in the canal. Jackie Muscott found Scented Mayweed <i>Matricaria reculita</i> on disturbed ground near the Wheel, a casual in Scotland. | MR |
| 20-27/08 | Common Comma Butterfly <i>Polygonia c-album</i> was seen frequently in Eskbank garden during this week, feeding on flowering Buddleia. Weather mainly warm and sunny. | EH |
| 24/08 | Black Tern at Aberlady. Yet another Comma Butterfly at Mey, Caithness. | BC CS |
| 25/08 | Several Butterflies gathered on a small bush in Inverleith Park - a Peacock; Small Tortoiseshell; Painted Lady and a Large White. | CR |

SEPTEMBER

| | | |
|-------|---|----------|
| 04/09 | 1 Peacock Butterfly in Craigleith garden. | DS |
| 14/09 | Yellowcraig: Frog Orchid <i>Coeloglossum viride</i> seen in flower. Several Waxcap fungi found including The Parrot <i>Hygrocybe psittacina</i> ; Earth Star <i>Geastrum triplex</i> and an Earthtongue <i>Geoglossum.sp.</i> Some of us found a large Spider, thought to be <i>Araneus quadratus</i> , in the heathland grasses. | MR |
| 16/09 | 6 Red Admiral Butterflies on <i>Sedum spectabile</i> , Craigleith garden. 1 Peacock Butterfly on balcony in Trinity. | DS LB |
| 17/09 | Peacock Butterfly flew purposefully into bottom of Jasmine; its night quarters? | LB |
| 21/09 | At Hound Point we saw Whimbrel, Arctic Skua and a Red-throated Diver. We also found the Blackened Waxcap <i>Hygrocybe conica</i> and seedheads of Field Gentian <i>Gentianella campestris</i> . | MR |
| | 2 Small Copper Butterflies at Haggis Knowe, Holyrood Park. | NT |
| 23/09 | 1 Red Admiral, Painted Lady Butterflies, Duddingston Loch. | NT |
| 24/09 | 1 Red Admiral on rose bush. | LB |

WEATHER

We enjoyed a lovely warm Indian summer during September, with only two wet days on the 7th and 9th, so in contrast with July this was reported to be the driest for 30 years. The Indian summer continued for the first half of October when it became very much colder. This was quite a shock, with severe frost in the third week, which finished off the bedding plants. We then had another very wet spell into November. MR

OCTOBER

| | | |
|-------|--|----------|
| 05/10 | <i>Lepiota aspera</i> , a southern species of fungus was the star find at a foray in Hopetoun grounds. With Roy Watling we also found the Ballet Dancer <i>Hygrocybe caliptriiformis</i> . | MR NT |
| | 2 Green Sandpipers, Bavelaw Marsh. | LB,EG,MP |
| 09/10 | At least 12 Red Admiral Butterflies on Hemp Agrimony, Arduaine Garden. | LB,EG,MP |
| 12/10 | Red-breasted Flycatcher at Crail. | BC |
| 19/10 | 8 Whooper Swans, Musselburgh. | NT |
| 26/10 | 2 Kingfishers, Duddingston Loch. | NT |

NOVEMBER

| | | |
|-------|---|----|
| 09/11 | White-rumped Sandpiper at Aberlady. | BC |
| 13/11 | One Kingfisher seen flying downstream from the weir on the North Esk, Ironmills Park, Dalkeith. | JL |
| | During the second half of October a Fieldfare came into the garden (Blackhall) for Rowan berries, upsetting the Mistle Thrush which had 'hogged' them. The bird returns regularly and is now feeding on fallen apples. It may be one of the birds which fed in the garden last winter. At the same time I was aware of more Blackbirds and watched a group of 5 descending on the Rowans, so I think that they must be Scandinavian migrants. Redwings and Fieldfares are moving about regularly in the area. | MR |
| 15/11 | White Waxcap <i>Hygrocybe virginia</i> in the garden; 20 Liberty Caps <i>Psilocybe semilanceata</i> ; Earth Tongue <i>Geoglossum</i> sp; Golden Spindles <i>Clavulinopsis helvola</i> ; and Inkcap <i>Coprinus micaceus</i> growing on Rowan roots. | MR |
| 16/11 | Tree Sparrows, Almondell. | NT |
| 23/11 | Little Auk at Yellowcraigs. | BC |
| 24/11 | An Albino Squirrel was seen on Craiglockhart Hill. | JW |
| 30/11 | Waxcaps in abundance on the East lawn at Hopetoun. They appeared very suddenly, so late in the year. | MR |

DECEMBER

| | | |
|-------|--|----|
| 06/12 | Large numbers of fungi still fruiting at Hopetoun, with many <i>Hygrophori</i> on the lawns. <i>Coprinus semitalis</i> also collected. | EF |
| 10/12 | Goosander (male), Duddingston Loch. | NT |
| 15/12 | Green-winged Teal at Barons Haugh. | BC |
| 20/12 | Goldfinch and Bullfinch returned to bird feeders after the frosty spell. | MR |
| 24/12 | A flock of geese lifted off from a grass field above Silverknowes promenade, making for Vane Farm across the river. A bat flew out from the small wood about 4.30pm; probably a Pipistrelle. | MR |
| 29/12 | Water Pipit at Barns Ness. | BC |

We have an interesting observation from Eunice:

| | | |
|-------|--|----|
| 25/05 | Wakened (2 witnesses) at 2.45am by a sound like a rasping saw. The sound continued - but unfortunately not long enough to make a recording. Could it be a Corncrake? Scepticism was reduced when later information became available that a Corncrake had been heard in Queen's Park, slightly earlier. | ES |
|-------|--|----|

Has anyone else heard a Corncrake in suburban Edinburgh?

The Observers were:

| | | | | | |
|----|----------------|-----|------------------|----|-----------------------|
| LB | Lyn Blades | BC | Bill Clunie | EF | Elizabeth Farquharson |
| EG | Ena Gillespie | EH | Elsbeth Hamilton | JL | Jean Long |
| MP | Margaret Perry | ChR | Christine Rae | CR | Charles Rawcliffe |
| MR | Mary Robertson | ES | Eunice Smith | DS | Dorothy Stuart |
| CS | Connie Stewart | NT | Natalie Taylor | JW | Janet Watson |

EDINBURGH BIODIVERSITY ACTION PLAN

Edinburgh Natural History Society is one of the partners in the Edinburgh Biodiversity Action Plan. This Plan has now come to the end of the first stage and was reviewed in November. Although much useful work has been done there was a consensus that in future more attention should be given to habitats rather than the heavy concentration on species. New planning is now taking place.

Eunice Smith (ENHS representative on the Steering Group)



SCOTTISH NATURAL HISTORY SOCIETY OUTING AT DUNBAR 13TH AUGUST 1898 LEADER MR GOODCHILD



TYNINGHAME MAY 27TH 1899 LEADERS MR P ADAIR AND MR J B DOBBIE



NATS OUTING to the PENTLANDS 22nd June, 2002

SCOTTISH SEABIRD CENTRE [or SSC]

The SSC has gone from strength to strength, improving its facilities and providing an extensive programme of educational and recreational events for all ages. Over the year it has won many awards, including the top *Thistle Award for Tourism* (the Oscar for Tourism in Scotland). The hard-working volunteers, now under the chairmanship of Mary Tebble, have also organised a variety of successful fund-raising events. The year started with Bill Gardner being awarded an MBE for his vision in thinking up the idea of the SSC and for his unrelenting work in realising his dream.

Mary has kindly provided us with this interesting diary of sightings for the year 2002.

JANUARY

- 9 -11th One Black-necked Grebe in North Berwick's East Bay seen from SSC Viewing deck.
- 18th 10-20 Gannets flew around the Bass Rock.

FEBRUARY

- 10th First Gannet seen landing on the Bass Rock.
- 15th 100s now on nest sites.
- 16th 300+ Guillemots seen crowded on stacks of Craigleith (gone by 17th).
- 27th Five Cormorants in breeding plumage (i.e. white thigh patches) seen on Craigleith nesting sites.

MARCH

- 9th 2 Razorbills seen swimming near Craigleith.
- 12th 7 Bottle-nosed Dolphins spotted in East Bay by Erich Hoyt from SSC Cafe.
- 19th First Puffins spotted on Fidra and Isle of May. Visitors could read the numbers on their leg rings.

APRIL

- 8th First Gannets sitting on eggs seen on Bass Rock .
- 15th Fascinating breeding behaviour of Shags observed by visitors. (see note below)
- 17th First two Sandwich Terns seen in East Bay.
30,000 pairs of Gannets on Bass Rock nesting sites.
20 Puffins spotted on Isle of May Stacks.
23 pairs of Fulmar on Craigleith Stacks.



MAY

- 2nd Last month's celebrities spotted were J. K. Rowling, Helen Baxendale and Gavin Hastings.
- 10th 80,000 Gannets on Bass seen (estimated). Puffins on Isle of May seen displaying, pirouetting and bill-fencing.
Most seabirds are now sitting on eggs.
- 16th Three Roe Deer seen swimming across East Bay.
- 25-28th Four Eider Ducklings spotted in East Bay.
- 28th Eighteen Eider ducklings with twelve 'aunties' in crèche, East Bay.
- 30th First Shag chick seen on Isle of May.

JUNE

- 3rd First Gannet chick spotted on the Bass.
- 7th Several seen, estimated as 10-14 days old.
- 14th Fifteen Sandwich Terns seen diving in East Bay.
- 19th Kittiwake, Shag, Razorbills, Herring Gull and Gannet chicks all to be seen on the camera screens in the SSC Discovery Centre.
- 30th 2 Dolphins seen in East Bay and 2 Minke Whales swimming near the Isle of May.

JULY

- 2nd Peregrine seen on Fidra Stacks.
- 3rd Shag chicks seen being ringed on Isle of May. All Gannet chicks still downy.
- 11th Liz Lochhead spotted in SSC.
- 13th Winter waders returning to the shore: Oystercatcher, Redshank, Curlew, Ringed Plover, Bar-tailed Godwit and Purple Sandpiper all seen from Viewing Deck.
- 14th Two young Gannets with emerging flight feathers spotted. Three Minke Whales seen near Isle of May.

AUGUST

- 5th Baby 'Puffling' found in North Berwick High Street - flown off course!
- 7th Gugas (dark juvenile Gannets) seen on the Bass.
- 8th All Puffins have left for the open sea.
- 16th Plague of wasps in cafe and on shore.
One Whimbrel flew across East Bay.
Gugas seen practising wing-beats on the Bass.

SEPTEMBER

- 6th Nine female Goosanders seen in East Bay.
71 Sandwich Terns also gathered there.
- 9th Several Grey Seals seen swimming near Isle of May.
- 20th 17 Gugas being cared for in Fred Marr's garden; rescued by him when stranded.

OCTOBER

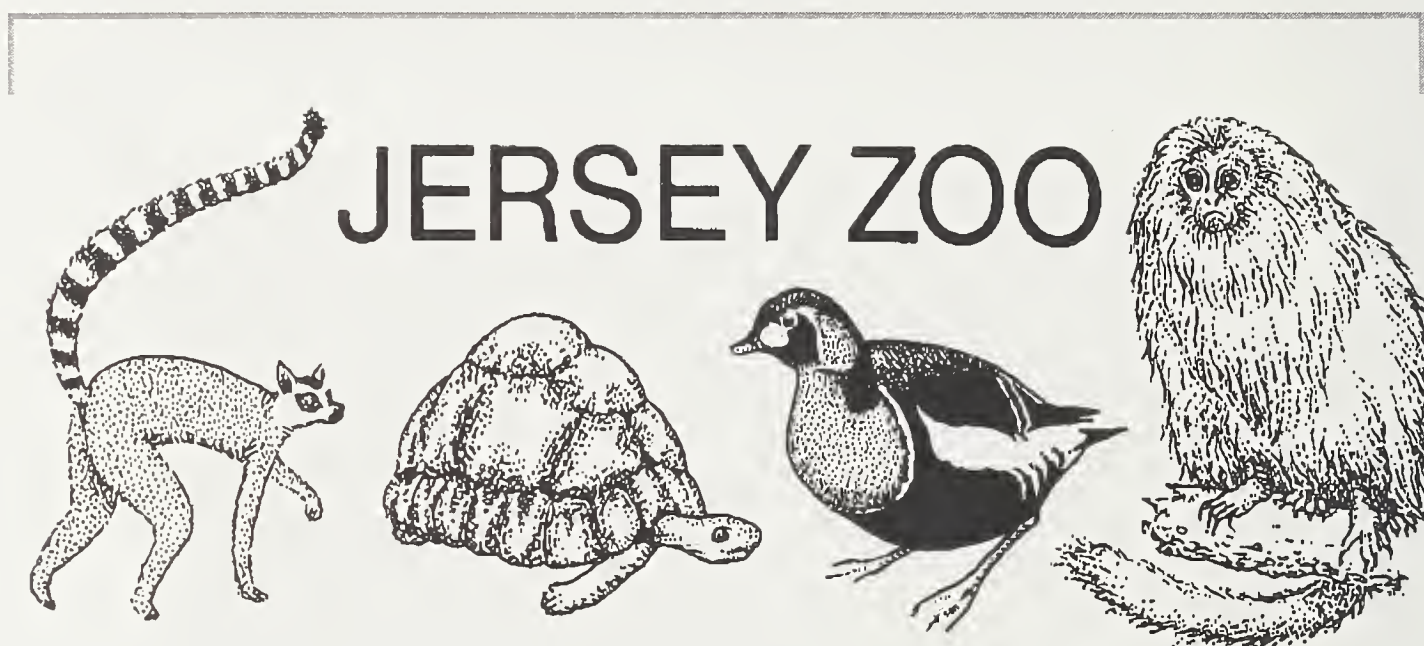
- 9th First Grey Seal pup seen born on Isle of May.
- 11th Seal pups on Isle of May seen being fitted with chips to trace their movements (mobile phone technology).
- 19th Very few Gannets left on the Bass now.
- 22nd 40+ white Seal pups with their mothers on Isle of May shore.
- 26th 2 Swallows on strand line.
- 31st Over 100 Seal pups viewed on Isle of May.

DECEMBER

- 14th Wonderful footage of interaction between Seal pups and their mothers seen on camera.

Note: FASCINATING BREEDING BEHAVIOUR OF SHAGS

The male sits on the cliff with his head thrown back, showing his orange gape. If a female lands, he throws his head back further and bows. She shows her acceptance by preening him. JM



Gerald Durrell founded the Zoo in 1959. He was much concerned that the populations of many species world wide, were dwindling towards extinction. He sought to counter this by encouraging creatures to breed in captivity and by training students from the areas from whence they came to look after them and help to introduce them to the wild. At present, interest is focused on Mauritius and Madagascar in the Indian Ocean, Mexico and Belize in Central America, Brazil and the Caribbean Islands of Jamaica, St. Lucia, St. Vincent and Dominica. There is much international co-operation between zoos and close links, with similar conservation organisations in Canada and the United States. The residential training centre at the Zoo provides for students and for professional environmentalists who come for special interest courses and for exchange of knowledge. The Zoo also has an education department which arranges for visits from schools.

In Brazil, the once impenetrable rain forest has been reduced to less than 2% of its original size due to the spread of agricultural and urban development. Trees are felled for timber and paper making. As I write, the post has arrived consisting only of five unsolicited mail items. None of them carries our name and address so this probably means they come through every letterbox. This junk mail always goes unread into the bin. At the Zoo are several species of tamarins and marmosets and similar animals which are being made homeless in their native lands by waste paper. Madagascar has its own range of creatures and plants which are unique to the island, including various types of lemurs.

Growing human populations are severely threatening these endangered species as well.

At the Zoo there are two Andean bears and some gorillas but otherwise the inmates tend to be small in size. There are parrots, cranes, flamingos and other birds in addition to several reptiles. In the grounds are many exotic trees, shrubs and flowers from around the world.

Eric & Eileen Perry

EXCURSIONS 2002



| | | PLACE | | LEADER |
|--------------|----------------|--|------|---|
| Saturday | 19th January | Belhaven Bay | O | Mary Tebble |
| Saturday | 14th February | Edinburgh Zoo | G | Janet Watson |
| Saturday | 16th March | Pentlands Walk | G | Janet Watson |
| Saturday | 6th April | Musselburgh | O | Noreen Stabler |
| Saturday | 20th April | Biodiversity Projects | B | Susan Steel |
| Saturday | 4th May | Whiteadder Walk | B | Duncan Gill |
| Saturday | 11th May | Roslin Glen (Birdsong) | O | Betty Smith & Lesley Fairweather |
| Saturday | 18th May | Newton Don | B | Michael Braithwaite |
| Saturday | 25th May | Tynninghame | B | Mary Clarkson |
| Saturday | 1st June | Inchcailloch Island | B | Ian McCallum |
| Wednesday | 5th June | Mortonhall | T | Andrew Gilchrist |
| Saturday | 8th June | Garleton Hills | B | Margaret Watson |
| 10-14th June | | ROTHBURY Organisers - Mary Tebble and Margaret Perry | | |
| Monday | | Cocklawburn N R | G | |
| Tuesday | | Craster - Low Newton | G | |
| | | Around Dunstanburgh | G | |
| Wednesday | | Upper Coquet Valley | B | John Steele |
| Thursday | | Farne Islands | O | |
| | | Druridge Bay N R | B | |
| Wednesday | 19th June | The Binns | G | Dan Watson |
| Saturday | 22nd June | Pentland Hills | B | Neville Crowther |
| Wednesday | 26th June | Blackford Hill | Ge | D McAdam & D Land |
| Saturday | 29th June | Flanders Moss | B | David Pickett, Steve Sankey & Betty Smith |
| Wednesday | 3rd July | Seafeld Moss, Bathgate | B | David Adamson |
| 6-7th | | GLENDOLL Organiser - Mary Clarkson | | Ken Slater & Stephen O'Kane |
| Wednesday | 10th July | River Esk, Loanhead | G | Margaret Perry |
| Saturday | 13th July | Woodhall Dean | B | Jackie Muscott |
| Wednesday | 17th July | Around Queen's Park | G | Margaret White |
| Saturday | 20th July | About Peebles | G | E & E Perry |
| Wednesday | 24th July | Cramond Island | G | Janet Watson |
| Saturday | 27th July | Bara Wood | G | George McDougall |
| Wednesday | 31st July | Union Canal | Gr | Graham Swift |
| Saturday | 10th August | Falkirk Wheel | G | Sandra Stewart |
| Saturday | 17th August | Menstrie Glen | G | F & M Dunn |
| Saturday | 21st August | Queen's Park | Bats | Natalie Taylor |
| Saturday | 24th August | Aberlady | O | Bill Clunie |
| Saturday | 31st August | Vane Farm | G | |
| Saturday | 7th September | Vogrie Gorge (L.Biod. Event) | Ge | Bill Baird |
| Saturday | 14th September | Yellowcraig | Fu | Mike Richardson |
| Saturday | 21st September | Hound Point | O | Tom Delaney |
| Saturday | 28th September | Duns Castle | Fu | Roy Watling |
| Saturday | 5th October | Colinton Glen | ML | Heather McHaffie |
| Saturday | 19th October | Kilspindie | O | Noreen Stabler |
| Saturday | 16th November | Almondell | G | Janet Watson & Christine Rae |
| 23-24th Nov | | MONTROSE Organiser - Andrew Gilchrist | | |
| Saturday | 7th December | Corstorphine Hill | G | |
| Friday | 13th December | Christmas Party | | |

EXCURSIONS 2002



BELHAVEN SHORE WALK

Date 19th January
Leader Mary Tebble

I for one had been greatly disappointed when Mary's walk was originally cancelled due to exceptionally nasty weather conditions on 20th October 2001, so I was very pleased that it was to go ahead in January. An intrepid group of 28 NATS met in the car park at the south end of the bay, all warmly wrapped against the fiercely cold wind, and eager to explore. The walk was split into three shorter walks; firstly we braved the strength of the wind and walked out along the cliff top trail, getting lovely views of various species, mainly ducks, waders and gulls, the highlights being Wigeon, Oystercatcher, Ringed Plover, Turnstone, Bar-tailed Godwit, Curlew, Goldeneye, Eider Duck, Golden Plover, Shag, Rock Pipit, and a single Slavonian Grebe. There were also a number of items of botanical interest, so all in all our progress was not fast! We returned to the car park by way of the shore, seeking some shelter from the wind. Before we tackled our lunch we took a brief walk in the opposite direction to investigate the birdlife on and around Seafeld Pond. This enabled us to add such species as Coot, Tufted Duck, Mute Swan, Pochard, Moorhen, Snipe, Little Grebe, Linnet and Mistle Thrush to our growing list for the day.

After lunch it was a short drive along to Winterfield Park for the third and final part of the day. From the tennis courts we walked along the coast towards Dunbar, getting as far as the harbour before turning back. We had further good views of various waders and ducks, and also saw a Red-breasted Merganser not far out. The real treat though was certainly watching a Grey Seal bobbing about in the harbour. Thanks to Mary for a most enjoyable day.

Natalie Taylor



Valentine's Day!

EDINBURGH ZOO

Date 14th February
Leader Janet Watson

We had a lovely visit to the Zoo on Valentine's Day. That's the day the penguins are given their stone rings to begin their nest building. We spent a fascinating time watching the males collecting stones and placing them carefully into the rings, ready for their mates to lay the eggs.

Rob Olsen from the Education Department gave us a very interesting insight into the working of modern zoos and we spent the rest of the day wandering around, enjoying watching the animals and appreciating the lovely views from Corstorphine Hill.

PENTLANDS

Date 16th March
Leader Janet Watson

Two days of cold weather and a dull, wet morning ensured that everyone was overdressed for the Pentland Walk deferred from last year. As the day turned out to be mild and increasingly pleasant, people were soon removing their waterproofs and woollies. Our route took us from Flotterstone, past Glencorse Reservoir, and round Capelaw and Castlelaw Hills, with a stop for lunch at Bonaly Reservoir.

We paused briefly at the start of the trip to look at the plaque to CTR Wilson who was born nearby. He invented the Cloud Chamber, which allowed physicists to study the behaviour of atomic particles. Then it was on towards the hills. A few Snowdrops *Galanthus nivalis* were in flower near the Visitor Centre, and later we saw catkins of Hazel *Corylus avellana* and Alder *Alnus glutinosa*, but otherwise we were reduced to examining this year's leaves and last year's skeletons.

The bare trees made lichens more visible however, and a number of common ones were noted. *Platismatia glauca*, *Parmelia sulcata*, *Hypogymnia physodes* and *Physcia tenella* are all grey-green 'leafy' lichens which lie flattish on the branches. *Evernia prunastri* and *Pseudevernia furfuracea* by contrast are 'bushy' with strap-like lobes which stick out. Those of

Evernia are creamy-white on the back, while those of *Pseudevernia* are usually blackened; otherwise they are very similar. The most conspicuous lichens however were the bright yellow *Xanthorias*: *Xanthoria parietina* on the larger branches and the smaller *Xanthoria polycarpa* on twigs. Both are usually fertile, covered with yellow-ochre 'jam tarts'.

We had not gone far before we heard the cry of a Buzzard, and one was sighted on a skyline conifer; later we heard more cries and saw a pair hovering above the hills. The characteristic call of an Oystercatcher greeted us at Glencorse Reservoir and we enjoyed the song of a Skylark on the hillside above. The birds, if not the flowers, were telling us that spring was here. Later there were glimpses of a Kestrel and a Green Woodpecker, and the sound of the Great Spotted Woodpecker drumming.

Lunch in the shelter of a Spruce plantation was a pleasant affair. The midges dancing beneath the trees were not of the biting kind, and we had a swimming exhibition from a Golden Labrador. Near where we stopped, however, we noted a large frog with the most peculiar colouring - contrasting patches of yellowish-green and blue-green. We suspected it was unwell. Later we came across frog spawn in flooded ruts in the track, and that too was in a bad way. So the amphibians appeared to be faring badly.

At higher levels the faded yellow of last year's grass was replaced by the dark purple of winter Heather *Calluna vulgaris*, and we disturbed the odd Grouse. The bare stems of Blaeberry *Vaccinium myrtillus* could be discerned in places, and there were large patches of the heath-loving moss Blaeberry in winter *Polytrichum commune* and *Vaccinium myrtillus* smaller patches of the heathy lichen *Cladonia arbuscula*. Below at one point we were delighted to see some Juniper *Juniperus communis* in a small enclosure, apparently with a lot of very young bushes. Perhaps a nursery?



As we came around Castlelaw the red flags were flying and the army was blazing away. The Iron Age fort and the souterrain at the foot of the hill are outside of the range of firing, however, and we ended our trip with a visit. The souterrain dates from about 200 AD, by which time the fort had ceased to be of defensive value. It was dug between two of the fort's ramparts, and consists of a long tunnel and a round 'room' off to one side; it is thought to have been used as a grain store. The surviving walls when excavated were around 4 feet high, so either they were

once a lot higher, or our ancestors were all about Hobbit size!

Jackie Muscott



Polytrichum commune

MUSSELBURGH LAGOONS

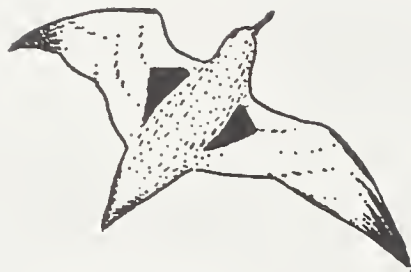
Date 6th April
Leader Noreen Stabler

On a sunny day a large number gathered at Musselburgh. Led by Noreen Stabler we began with a brisk walk at the back of the lagoons to the boating pond, and up to the scrapes to look out from the hides.

On the scrape was a good selection of waders: small Dunlin to tall, curved beaked Curlews; a group of Knot standing shoulder to shoulder; Grey Plover with their black 'armpits'; and one Ringed Plover digging sporadically while rushing to and fro. Redshank and Bar-tailed Godwit probed to a deeper level for food, while Oystercatchers called noisily. Little Teal were a lovely contrast to large Shelduck, and Shoveler fed in their individual style. Skylark soared and sang high above us. Meadow Pipit, Linnet and Reed Bunting were spotted in the grassy areas around the scrape.

The day before on the Forth there had been a splendid pair of Slavonian Grebe going into summer plumage. Today there were Eider and Velvet Scoter, and when we had walked as far as the mouth of the River Esk there were Wigeon and Goldeneye on the water, and Turnstones directly below us, flipping over stones with great enthusiasm.

In the afternoon we explored a different type of habitat. Having driven up to St. Michael's Church at Inveresk we took the path along the Esk. There had been little of botanical interest around the lagoons but here we found a number of plants in bloom. These included Butterbur *Petasites hybridus*, Few-flowered Leek *Allium paradoxum*, Lesser Celandine *Ranunculus ficaria* and Primrose *Primula vulgaris*, all in bloom. A Small Tortoiseshell Butterfly flew about. A Chiffchaff calling was seen well, as the leaves did not totally obscure the birds. Wren, Blue Tit and Great



Grey Plover
.....with its black armpits

Ringed Plover

..... digging sporadically while rushing to and fro



Tit were there, while by the river a Dipper was bobbing and a Grey Wagtail too. Mallards floated by and a Kestrel hovered, while some of us turned for home and others walked further upriver.

Most of us who completed a circular route found a lovely spread of Sweet Violet *Viola odorata* on the railway embankment by the path along the top of the field.

Molly Woolgar

BIODIVERSITY PROJECTS AT RED MOSS SWT RESERVE AND THREIPMUIR RESERVOIR

Date 20th April
Leader Susan Steel

The day was divided into two parts. We started by visiting Red Moss Nature Reserve, followed by a walk along Threipmuir and round Harlaw Reservoir. The group met up at Balerno High School and the excursion started with a lengthy but scenic detour by road to reach Threipmuir car park (for those who followed the diversion). Others who showed initiative and ignored the 'road closed' notice arrived first, having managed to negotiate the direct route!

The Red Moss Reserve is managed by the Scottish Wildlife Trust using a combination of staff and volunteers. Since the 1980s attempts have been made to dam the main drainage channel to prevent the drying out of the dome of raised bog. Regular removal of tree regeneration from two of the nine compartments identified in the management plan takes place annually to prevent drying out of the bog. Another aspect of management has been to provide access and enjoyment for people via a boardwalk, with interpretation boards highlighting some of the management issues and illustrating some of the rare and interesting species found on the bog. Some of these are identified in the Edinburgh Biodiversity Action Plan, including five invertebrates: a Click Beetle *Ampedus balteatus*, Small Pearl-bordered Fritillary *Boloria selene*, Hieroglyphic Ladybird *Coccinella hieroglyphica*, a Planthopper *Criomorphus moestus* and a Micromoth *Lampronia fuscata*; and two plants: Cranberry *Vaccinium*

oxycoccus and Magellanic Bog Moss *Sphagnum magellanicum*. These species require specialists to monitor them, and in some cases a balancing of management to cater for their differing requirements.

An example is the need to remove some of the young Birch trees to maintain the raised bog habitat, while retaining some to provide a niche for the micromoth which only occurs in regenerating Birch woodland. The Edinburgh Biodiversity Partnership has also contributed to a baseline survey of Marsh Violet *Viola palustris*, the food plant of the Small Pearl-bordered Fritillary Butterfly, which is rare in SE Scotland and of which there is a small colony amongst the damp unimproved grassland of Balerno Common. A specimen of Marsh Violet in flower was found later on the shore of Threipmuir. By managing to maintain a suitable habitat and food source for the Butterfly we can help towards ensuring the long-term survival of this declining species.

The second part of the day involved more walking and botanising, as well as discussion on issues of water levels outlined on the interpretation boards provided by Scottish Water. A balance between the need to manage the reservoirs to alleviate flood damage downstream, and the needs of wildlife and in particular nesting birds (e.g. Great Crested Grebe) requires to be sought. One solution would be to provide a barrier to control the flow, to maintain a more constant water level in Bavelaw, while altering the level of Threipmuir for flood and drought management of the Water of Leith.

The group met up for lunch at the Harlaw Visitor Centre, which provided shelter from a cold wind. The wildlife garden was explored and would be worth a return visit later in the season and on a warmer day. After lunch the wind had increased and the party completed the walk at varying speeds during the early part of the afternoon.

Susan Steel

WHITEADDER WALK

Date 4th May
Leader Duncan Gill

Willow Warblers and Chiffchaffs were singing in the woods as the party assembled at Abbey St. Bathans, and when we started across the nearby bridge we caught a glimpse of Grey Wagtails on stones upstream. A few paces farther on, our attention was drawn to one of my favourite spring flowers, Townhall Clock *Adoxa moschatellina* growing just beside the path amongst Lesser Celandine *Ranunculus ficaria*. In the background, the unmistakable ringing call of the Green Woodpecker was heard. Our way led uphill, through trees and across a meadow and then, as the path through the woods on the north bank of the Whiteadder was closed, along minor roads for a mile or so. We were passing through open countryside and the views were superb; a real bonus as we had not expected to enjoy the road walk.

As we rejoined the intended route, one of the party spotted a Bark Puffball *Enteridium lycoperdon* on a log. This is the fruit body of one of the larger slime moulds, or *Myxomycetes* and it appears in spring as a shining silvery excrescence on dead wood.

The next section of the way was one of the most beautiful, through trees in their best spring green, above a sparkling stream whose banks were lined with Golden Saxifrage *Chrysosplenium oppositifolium*, Wood Sorrel *Oxalis acetosella* and Wood Anemones *Anemone nemorosa*, with bird song all around. Our lunch spot was idyllic, under the trees on the river bank. We crossed the river gingerly, one at a time, by a very rickety bridge and were rewarded on the other side by the sight of one of our most beautiful spring flowers, Meadow Saxifrage *Saxifraga granulata* growing by the path. Our way led across a field with, along one side, a stand of old Blackthorn *Prunus spinosa*, much of which was heavily infected with a bracket fungus, *Phellinus pomaceus*, which looked fairly similar to the Buckthorn Bracket *Phellinus hippophaecola* so familiar to us from the East Lothian coast.

A stiff climb brought us to Edin's Hall Broch, standing in a strategic position at the foot of Cockburn Law on a bank about 200 feet above the river and commanding the valley in both directions. The Broch is about 90 feet in diameter with chambers set within the walls and traces of steps to a higher level, though the maximum height is now only 5 or 6 feet. The walls were still in amazingly good condition and it was possible to see where nearby dwellings had stood – and to climb over them as a short cut to the next section of path. This lay downhill through a wonderful meadow of Wood

Anemones, many thousands of them nodding their heads in the light breeze as Skylarks sang overhead. Some of the party found a little cup fungus on a stalk, later identified as *Sclerotinia tuberosa*, which has a close association with Wood Anemones. Banks of Golden Saxifrage lined the narrow road leading us back to our starting point – and tea out-of-doors from the nearby restaurant.

Mary Clarkson

ROSLIN GLEN

Date 11th May
Leaders Betty Smith and Lesley Fairweather

After a grey and misty week, it was a relief to find this Saturday full of sunshine and birdsong. The leaders, regular recorders for the Common Bird Census at Roslin, were with the group of 25 during the morning. David Ross, the convenor, gave an introduction to the 18 hectare Scottish Wildlife Reserve. It is part of the largest remaining ancient semi-natural native woodland in the Lothians, and most of it is included within the Roslin Glen SSSI. It is managed with the aim of maintaining and enhancing the mixed native Oak-Ash-Elm woodland and improving its value for wildlife. Much of this wildlife was in evidence during the day.

Goldfinch were quickly spotted at the start and several songbirds gave clear renderings of their individual theme tunes. The Willow Warbler's had a plaintive downward drift, while the Blackcap gave a fruity song with a distinctive dee da dee at the end. The confident Chaffinch always finished with a flourish, and the Wren with its very loud song gave the game away by having a "trill in the middle". By hearing these birds individually it was possible to memorise them, so giving a foundation for the others that followed. We then moved into the main part of the Reserve, seeing a Kestrel, a pair of Buzzards and even a Tawny Owl. After a slippery, steep descent to the lower path two Great Spotted Woodpeckers showed off their nest-hole in an old limb of a mature Beech tree.

As we walked along by the North Esk, young regenerating Oak trees could be seen. These have been protected from the many Roe Deer and Rabbits to ensure their growth is uninterrupted.

Some of the party chose to picnic amongst the Bluebells, others in the park at the base of the Reserve, and the afternoon allowed stravaiging in the glen or by the castle and Rosslyn chapel.

Lesley Fairweather

NEWTON DON

Date 18th May
Leader Michael Braithwaite

A large party of NATS gathered for the excursion to Newton Don led by Michael Braithwaite, Botanical Recorder for Berwickshire, and his wife Paddy. The day began with a quick trip to the kitchen garden to view an unusual weed, American Speedwell *Veronica peregrina*, while waiting for latecomers. This little annual was first recorded on the estate in 1873.

After that the party toured the grounds, first through woodland, then out into a splendid unimproved meadow, where we had lunch under some large trees (naturally it started to rain at this point). Then back to the woodland paths and the riverside.

Both trees and herbaceous plants were an interesting mixture of native and introduced. Among the non-native trees were some fine Cedars *Cedrus spp*, Horse Chestnuts *Aesculus hippocastanus*, Norway Spruce *Picea abies*, Douglas Fir *Pseudotsuga menziesii*, False Acacia *Robinia pseudoacacia*, Silver Fir *Abies alba* and the tree no Victorian estate could be without, Big Tree or Wellingtonia *Sequoiadendron gigantea*. There were also some Lawsons Cypresses *Chamaecyparis lawsoniana* grown big enough to deter any sane gardener from planting them.

Introduced herbaceous plants included the handsome Broad-leaved Meadow Grass *Poa chaixii*, not infrequently planted on old estates, and the now commonplace Daffod *Narcissus spp* and Leopardsbane *Doronicum pardal* Fringe Cups *Tellima grandiflora* and Broad-leaved Ragwort *Senecio fluviatilis* which also goes by the more romantic name of Saracens Woundwort, are widely distributed, while Ostrich Fern *Matteuccia struthiop* named for the shape of its fronds, is something of a rarity. Native herbs included Wall Lettuce *Mycelis muralis*, Wood Sedge *Carex sylvatica*, Giant Bellflower *Campanula latifolia*, Green Figwort *Scrophularia umbrosa*, Dogs Mercury *Mercurialis perennis*, and Meadow Saxifrage *Saxifraga granulata*, many of them old-woodland indicators.

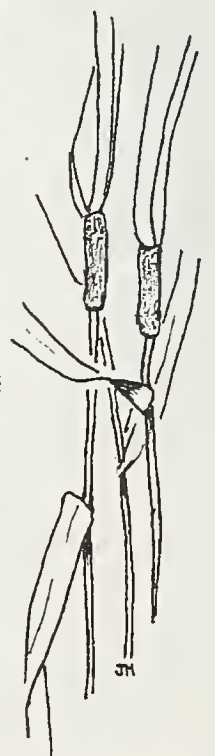


Fringe Cups
Tellima grandiflora

Our lunchtime meadow was an attractive sight and a rare one in these days of intensive farming. It was notable more for the variety of the plants than their rarity, but Adder's Tongue *Ophioglossum vulgatum* grows there, and some of the party managed to locate 3 plants before sitting down to lunch. After lunch we made 2 attempts to get out, the first exit having been blocked. This turned out to be a lucky chance, for Mary Tebble found the 'plant of the day' while traversing between the two gates; it was later identified as Grey Sedge *Carex divulsa ssp leersii*, not previously recorded at the site, and a rarity in Scotland.

Back in the woods we were able to approach the river to see Alternate-leaved as well as Opposite-leaved Golden Saxifrage *Chrysosplenium alternifolium* and *C. oppositifolium* respectively. By an old pump house we came upon a patch of Brittle Bladder Fern *Cystopteris fragilis*, so large I initially mistook it for Lady Fern *Athyrium filix-femina* which was also present. Nearby was a large patch of an introduced Ivy, *Hedera colchica* or Persian Ivy. The outcrops must be quite base-rich hereabouts, as Hoary Cinquefoil *Potentilla argentea* and Hoary Plantain *Plantago media* can both be found on the opposite side of the river.

Some interesting microfungi included an extensive infection of Choke *Epichloe typhina* on Wood Meadow Grass *Poa nemoralis*. This fungus first appears as white bands round the stems of grasses. The bands eventually become yellow, and the fungus weakens its host and prevents it from flowering. The smut *Ustilago violaceae* could be seen on the anthers of some flowers of Red Campion *Silene dioica*. It hijacks the anthers, turning them violet and shedding purple fungal spores rather than yellow pollen. It also commonly infects Lesser Stitchwort *Stellaria graminea*. There was a rust *Puccinia chrysosplenii* on the leaves of the Alternate-leaved Golden Saxifrage (though not apparently on its Opposite-leaved cousin). The cause of extensive Witches Brooms seen on a Hornbeam *Carpinus betulus* is also a fungus - *Taphrina carpini*.



Choke on grass
Epichloe typhina

Birds present included Buzzards which definitely seem to be more common these days, Mistle Thrush, Chiffchaff (though no Willow Warblers) and the possible sighting of a Dipper in the stream. A very pleasant day out ended with a short journey down the road to the Garden Centre at Floors Castle, where most of the party had tea.

Jackie Muscott

TYNINGHAME

Date25th May
 LeaderMary Clarkson

As Tynninghame is such a familiar area to many of us, it seemed a good idea to obtain permission for the group to walk on some of the Estate paths to give slightly different habitats and to enable us to make a round trip, always more enjoyable than a ‘there and back’. It was a bright day but with a very strong westerly wind, and we were glad of the shelter of the trees as we made our way southwards along the edge of the saltmarsh. Thrift *Armeria maritima* was just coming into full bloom and colouring the whole marsh pale pink. There was a good selection of plants characteristic of such areas, including Saltmarsh Rush *Juncus gerardii*, Sea Milkwort *Glaux maritima*, Sea Arrowgrass *Triglochin maritima*, and Sea Wormwood *Seriphidium maritima*. Along the shoreline were found Hound’s Tongue *Cynoglossum officinale*, Black Horehound *Ballota nigra*, Purple Milkvetch *Astragalus danicus* and Scarlet Pimpernel *Anagallis arvensis*. Meanwhile, those whose eyes were not glued to the ground spotted a surprisingly large number of birds, bearing in mind the windy conditions: Grey Heron, Curlew, Cormorant and Shelduck to mention but a few. The find of the day was also a bird, a Spoonbill, and we had wonderful views of it standing not far from us on the opposite bank of the river.

The return route was through the Estate, past a plantation of young broad-leaved trees, Oak and Southern Hemisphere Beech, through one of young conifers and along a ride lined by mature Beech and Oak. One young Oak had many galls, identified for us by Mary Robertson as the Oak Apple Gall *Biorhiza pallida* and the Cotton-wool Gall *Andricus quercusramuli*. The plants were those of spring woodland and included the beautiful Meadow Saxifrage *Saxifraga granulata* and Yellow Figwort *Scrophularia vernalis*, an introduced species, quite common here. Numerous woodland birds were seen: Spotted Flycatcher, Goldcrest, Willow Warbler and Great Spotted Woodpecker, among others, and the songs of Blackcap and Garden Warbler were heard.

We had followed a similar route, though in reverse, through part of the grounds on 18th June 1983 and were able to use the species lists from that excursion to ‘tick off’ this year’s finds. Margaret Watson had attended the earlier excursion and remembered that the find of that day had been a male Orange Tip Butterfly, which was just moving north into Scotland at that time. Almost twenty years on, we saw several Orange Tips, both male and female, even on a very windy day.

It was just as well that we had gone to the saltmarsh first for, when we returned, it was covered by a very high tide!

Mary Clarkson
 * * * * *

INCHCAILLOCH, LOCH LOMOND

Date1st June
 LeaderIan McCallum

The last occasion I led this combined outing of the Glasgow and Edinburgh Societies in 1998 there was a total attendance of 15. This year when I applied for the SNH permit I asked for permission for 20 people to visit the Island. Probably due to a good weather forecast a total of 44 members gathered at Balmaha. (24 Edinburgh & 20 Glasgow). I understand that if the Edinburgh bus had been larger there might have been even more. It is heartening when numbers are falling away in most organisations that we had such an enthusiastic response.

In order to sail to the Island we had to use two of the larger ferries, which meant a slight delay between the two parties landing. The parties were given a short introduction to the Island, when it was explained that Inchcailloch means the ‘Isle of the cowled women’ which referred to the establishment of a nunnery on the Island by St Kentigerna. It was also stated that no one had lived on the Island for the last 200 years. At that time it had been a farming community growing oats and barley. The flora and fauna were very different then and included Black Grouse and Brown Hare, but only a few woodland species such as Great Spotted Woodpecker. In 1796 the tenant farmer was told to plant acorns and Alder cones and from that time a

Loch Lomond 1900
 "It was intended to have a joint excursion on June 30 to Ben Lomond with the Glasgow Natural History and Geological Societies, for the purpose of studying the geological features of the district and the alpine flora. Owing to considerable alteration in the time of departure of the trains, it was found that our members could not join the Glasgow party, unless by going to Glasgow or Rowardennan the previous day and staying overnight. It was therefore decided to abandon the excursion."
 From *Transactions of The Edinburgh Field Naturalists and Microscopical Society*

Travelling is easier in 2002!

system of woodland management evolved involving the coppicing of Oak and Alder. The Oak bark was used for tanning leather and the stripped timber was used to make vinegar, wood tar and dyestuffs at a factory in Balmaha. The Alder was used for wooden clogs and for gunpowder.

From the shore we climbed up the steps to where the path divides, the more agile members taking the route to the summit, while the rest walked through the central valley to Port Bawn. The route to the summit went through the Alder wood where Wood Warblers were seen and heard. The Alder wood is marshy and had plants such as Great Bittercress *Cardamine amara*. The next stop was at the conglomerate exposure, when it was explained about the Highland Boundary Fault, which runs through the Island. The conglomerate is a 'hard' rock and forms the high ridge of the fault, which also forms Conic Hill. On the west side of the Island the conglomerate is replaced by an outcrop of serpentine rock, which is softer, but base rich, and which gives more diverse vegetation. The serpentine rock was used as a fertiliser as there was no local limestone available.

On the route to the Viewing platform there were good views of Tree Pipit, Wood Warbler and Garden Warbler. At the Viewpoint we had an excellent panorama of the hills to the south including an island called the Kitchen, which is thought to have been used as a crannog about 2000 years ago.

At the Summit there was a 10-minute break for tea and to admire the views to the north, of the Loch and the surrounding hills. The sun shone and the cameras clicked. The summit was not without interest with Ospreys over the Loch, a family of Crossbills in a nearby tree, and a glimpse of a Redstart.



EP
Crossbill

On the descent, an area at the side of the path was pointed out where there were tracks and signs of Fallow Deer. Farther down the trail the party were shown a corn-drying kiln, which had been used when the Island was farmed.

At Port Bawn we met up with the rest of the party and lunch was enjoyed in the sunshine. The SNH warden, Colin Teago who is based there, was very helpful and arranged for the toilets to be open. The party which had come through the Central valley led by Mary Robertson, had found the fungus, Chicken of the Woods *Laetiporus sulphureus* which had been found on our previous excursion.

After lunch we continued along the west side of the Island, where we moved into the base-rich area of the serpentine rock and saw Woodruff *Galium odoratum*, Maidenhair Spleenwort *Asplenium trichomanes*, etc. The track was full of surprises: Wood Warblers, Blackcaps and Long-tailed Tits turned up. As we progressed along the path we crossed depressions, which are the remnants of the early 'ridge and furrow' cultivation system.

Our next stop was at the ruined farmhouse, which had been used to stable horses at the time of the 1914-18 war. The horses were used to haul timber for the mainland. It was noted that timber was extracted from the Island in the 15th Century to build ships for a punitive expedition against the Lord of the Isles.

We arrived at the burial ground where the leader was delighted to find a stone erected to an earlier McCallum. The burial ground contains the ruins of the 13th Century church dedicated to St Kentigerna.



Pied Flycatcher

The grass cutting in this area has probably removed many wild flowers. However, Pied Flycatcher, Jay and another group of Crossbills feeding on Oak more than compensated.

The leader was quite delighted when Susan Crowther reported that the 42* members who had come onto the Island were safely stowed on the returning ferries. Safely on shore the Societies gave a vote of thanks to the Leader.
Ian C McCallum

* We did not lose two! Two members had opted to enjoy their bird-watching on the mainland.

GARLETON HILLS

Date 8th June
Leader Margaret Watson

Thirteen of us gathered in the Byres Hill car park on a pleasant sunny morning. After admiring a large stand of Dame's Violet *Hesperis matronalis*, we climbed up the hill to the Hopetoun Monument from which one can have the very best panoramic view of East Lothian. It was a bit misty so we could not see this clearly, but the ground around the tower was rewarding botanically. We had seen Sanicle *Sanicula europaea*, the leaves of Enchanter's Nightshade *Circaea lutetiana* and Foxgloves *Digitalis purpurea* on the way up and had heard Willow Warblers singing. Around the Tower on the thin soil, we found Sheep's Sorrel *Rumex acetosella*, Heath Bedstraw *Galium*

saxatile, Heath Groundsel *Senecio sylvaticus*, Parsley Piert *Aphanes arvensis*, Early Forgetmenot *Myosotis ramosissima* and the buds of Lady's Bedstraw *Galium verum*.

Betty Mitchelhill explained that we were standing on a volcanic plug rather like Arthur's Seat and she showed us the vesicles in frothy seams in the stone walls of the Monument. On the way down the hill we noted Dovesfoot Cranesbill *Geranium molle* and Sand Spurrey *Spergularia rubra* in the short turf, and found Rough Chervil *Chaerophyllum temulum* in the woodland when we circled the hill to find the way across the fields to Skid Hill. This involved some athleticism in the climbing of fences and gates, and a close encounter with an advancing herd of over-curious cows. We heard a singing Skylark, and Yellowhammers and Linnets singing in the Gorse.

At the top of Skid Hill, which is another volcanic outcrop, we found Early Hairgrass *Aira praecox* and a large patch of Bur Chervil *Anthriscus caucalis*, and examined the hooked hairs on its fruit with a hand lens. We used the lens also to look at the anthers of the male Stinging Nettle *Urtica dioica*, the flowers of which hang in long drooping catkins. Some of us saw lovely Meadow Saxifrage *Saxifraga granulata* growing here too; an unexpected surprise.

We took a curved gradual descent into the nearby quarry and on the way down found a patch of Field Madder *Sherardia arvensis* and another of Wild Thyme *Thymus polytrichus* in flower on a little bank.

Entering the quarry, Lyn pointed out the leaves of Maiden Pink *Dianthus deltoides*, near to which were many large garden snails. We saw Changing Forgetmenot *Myosotis discolor* and a sedge which we identified later as Prickly Sedge *Carex muricata* ssp *lanprocarpa*. The quarry proved to be the most interesting habitat of the day. The highlight of our finds for me was being shown many patches of Knotted Clover *Trifolium striatum* by Jackie Muscott. This is a rare little plant, also known as Soft Clover, which grows mostly on volcanic outcrops.

We found a single Columbine *Aquilegia vulgaris*, a few plants of Hedgerow Cranesbill *Geranium pyrenaicum* and a large patch of the leaves of Soapwort *Saponaria officinalis*. Jackdaws, very noisy, were nesting in a rock crevice of the quarry and we heard an Oystercatcher passing over. In a scrubby waste patch we saw two Small Copper Butterflies resting on Green Alkanet *Pentaglottis sempervirens* and Fox-and-Cubs *Pilosella aurantiaca*, the Orange Hawkweed. Two Small Tortoiseshell Butterflies were nearby and John Watson spotted a baby lizard scurrying into the undergrowth.

We proceeded over more fences and gates to the road where white Lesser Sea Spurry *Spergularia marina*

lined the verge - perhaps brought in with the sand and salt used to grit the road in winter. Within the roadside vegetation we saw some small, beautiful pastel-green sap-suckers.

We climbed over another easy stile and walked up to the mast on Barney Hill. An unusual and fascinating find was a little powderpuff of baby spiders clinging to grass stalks. Stooping to peer at them through her hand lens, Jackie told us they had "black legs and tails and little yellow nappies". On the top of Barney Hill we found a dead log encrusted with globules of orange and buff-coloured fungi, later identified as *Leucogala epidendrum*.

This was the furthest point of our walk. We turned and retraced our steps back to the car park. We had had a lovely interesting day, and thanked Margaret Watson for her able leadership.

A few of us had a final delight: we watched a Spotted Flycatcher making little fly-catching sorties to and from a nearby gatepost.

Mary Tebble

THE BINNS

Date 19th June
Leader Dan Watson

We had a pleasant evening for the trip to the Binns, led by the National Trust for Scotland ranger, Dan Watson, who is also responsible for Newhailes. He led us round the grounds and through the woods and up to the highest point, complete with tower and excellent views in all directions.

The woods at the Binns are good for Yellow Figwort *Scrophularia vernalis*, but some of the more interesting finds were on the small volcanic outcrops below the tower: Knotted Clover *Trifolium striatum* and Crested Hairgrass *Koeleria macrantha*, as well as the more commonplace Dovesfoot Cranesbill *Geranium molle*, Wild Thyme *Thymus polytrichus* and Early Hairgrass *Aira praecox*.

On completion of the rounds, Don offered to take us to Binns Mill Wood on the edge of the estate, and some of the party decided to extend the evening. We were surprised to find rather stunted Canary Grass *Phalaris canariensis*,



Canary Grass
Phalaris canariensis

a birdseed alien, growing on the stone gateposts.

Once inside we had to run the gauntlet of a herd of inquisitive bullocks before we came to the ruins of the mill. We then returned through woods on the other side of the stream (Midhope Burn). This turned out to be more exciting than expected as it was very overgrown, but we did find some interesting fungi on fallen trunks: Dryad's Saddle *Polyporus squamosus*; Wood Puffballs *Lycoperdon pyriforme*; Ink Caps *Coprinus sp* (being munched by a large speckled slug, probably *Limax maximus*), and an uncommon bracket *Hapalopilus nidulans*, which has no English name.

We were glad to escape from the wood before darkness fell and the birdies came to cover us with leaves - though I'm not sure that the Buzzards and Oystercatchers we had noted go in for that sort of thing.

Jackie Muscott

PENTLANDS WALK

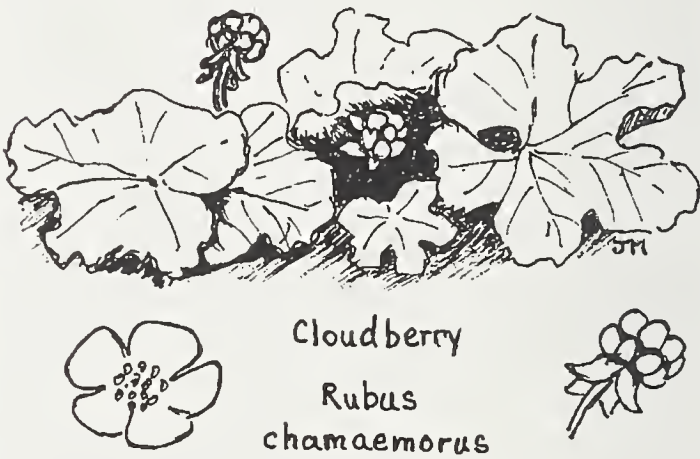
Date 22nd June
Leader Neville Crowther

When we began, the weather prospects were dim and so for the most part it proved. Twelve hardy souls girded for whatever the elements could discharge, left Habbies Howe at Nine-Mile Burn and walked over Paties Hill to the North Esk reservoir. Enthusiasm was difficult to maintain in the pounding rain, but some claimed to see the Globe Flowers in the marsh below the dam which is part of Esk Valley SSSI. A marsh at the spillway gave us lots of species in a small area, such as White Sedge *Carex curta*, Marsh Cinquefoil *Potentilla palustris*, Marsh Bedstraw *Galium palustre*, several Sphagnum mosses *Sphagnales*, Toad Rush *Juncus bufonius*, Marsh Willowherb *Epilobium palustre* and Common Yellow Sedge *Carex viridula ssp oedocarpa*. The Black-headed Gull colony was noisy and active, but feral Greylags, Tufted Duck and Little Grebes were the only other birds seen on the water.

We searched the edge of the reservoir for Moonwort *Botrychium lunaria* and found only one. Perhaps Mike Jones's fears about its decline are justified. The fortunes of the Hairy Stonecrop *Sedum villosum* in contrast appeared good with large numbers flowering on the rocky flushes along with Butterwort *Pinguicula vulgaris*, Ragged Robin *Lychnis flos-cuculi* and several sedges - Common Yellow *C. viridula ssp oedocarpa*., Flea *C. pulicaris*, Glaucous *C. flacca*, Carnation *C. panicea*, Common *C. nigra* and Dioecious *C. dioica*. We followed the Henshaw Burn hoping to see Mountain Pansy *Viola lutea*, but a large herd of cattle had poached and eaten down the

site. However higher on the Midlothian side of the burn the herb-rich grassland produced several square metres of flowering Rock-rose *Helianthemum nummularium* and Sedges: Pill *Carex pilulifera*, Spring *C. caryophylla*, and Glaucous and Carnation again. The outcropping of calcareous sandstones of the North Esk inlier along this contour gave good diversity.

The rain relented sufficiently for us to enjoy the stupendous views over West Lothian, the Bridges and Fife, and eat lunch in the lee of the dyke at the Borestone. Acres of fruiting Cloudberry *Rubus chamaemorus* were the main attraction across the first mile of Kitchen Moss, although the vegetation altered frequently depending on the stage reached by the muirburn cycle. The monotony of Meadow Pipit activity was relieved by Curlew and Skylark song, but the star attraction turned out to be three Golden Plover, plaintively piping from close by on the moss and then



flying over within feet of our heads.

The weather finally improved as we climbed through the montane grassland towards East Kip and along Monk's Rig to look down on Habbies Howe. The views across Auchencorth Moss gave us clear evidence of the degree of loss of this internationally valuable habitat, due to both reafforestation at Sykes Clough and peat extraction to the north. Only the Midlothian sector (about a third) of what was once the largest moss in the region remains relatively unscathed.

As the last stile was climbed and our cars came into view we could reflect on a day which exceeded its promise. I think there were a few tired legs that night, including mine.

Neville Crowther

BLACKFORD HILL

Date 26th June
Leaders David McAdam & David Land

This was a joint excursion with the Edinburgh Geological Society led by their Excursion Secretary and a Past President. As a preliminary, the party walked to the summit of Blackford Hill for a panoramic overview of the geology of the Lothians. The excursion was concerned with the lava flows which make up the bedrock of the area, and with the effect on the landscape of the much more recent Ice Age. The party was shown a number of features relating to this.

Blackford Hill is composed of a flow of purplish-grey andesite lava about 80 metres thick, one of the complex of lavas which make up the Braid and Pentland Hills, which were erupted some 410 million years ago. During the last Ice Age, about 20,000 years ago, the area was covered by a thick ice sheet which was moving slowly in an easterly direction. The ice ground down the underlying rocks, making west-facing slopes steeper and more craggy, and east-facing slopes smoother and more gentle. This is called a 'crag and tail' formation of which Blackford Hill is a good example.

Blackford Quarry, now disused, was worked for road metal because the number and nature of the cracks in the andesite made it unsuitable for building stone. An unworked ridge is prominent in the old quarry and the west face of this coincides with a geological fault along which earth movements took place in the remote past. On this face, we were shown examples of 'slickensides', where the rocks were mutually polished, and of 'brecciated', or broken rock.

The Agassiz Rock, at the south-eastern end of the quarry, is a site of historic and international importance. Here, the Swiss geologist, Louis Agassiz, was the very first person to recognise that an area, where there was now no sign of ice, had been covered by an ice sheet in the distant past.



The Society visited the Agassiz Rock in 1911

The andesite lava flow of Blackford Hill rests on an earlier lava flow of a type called trachyte distinguished by its pale brown colour and rough surface. Blocks in the wall by the path running north-west from Scout Bridge demonstrate the two types of lava.

A small cliff almost hidden by vegetation about 50 metres south of Blackford Pond shows brown trachyte overlain by volcanic ash, overlain by purple andesite.

Near the Midmar entrance are two rocks displayed in a surround of granite setts. These rocks are of a type called dolerite and must have been carried here by the ice from an outcrop somewhere to the west. Such rocks are called 'erratics'.

Blackford Pond itself lies in a hollow gouged out by the ice as it was forced past Blackford Hill.

This excursion was to an area which some of us thought we knew well. However, to look at it afresh through expert eyes was an enlightening experience.

Mary Clarkson

FLANDERS MOSS

Date 29th June
Leaders David Pickett, Steve Sankey
and Betty Smith

Aerial photographs show that Flanders Moss covers a large area in the Carse of Stirling, 859 hectares to be exact. 80% of it is a National Nature Reserve which has been nominated as one of the EU's Special Areas of Conservation; obviously not just any old bog then.

With David Pickett of SNH and Steve Sankey of SWT to guide us, we set off in single file on a track between 1.5 metre-deep ditches. Four years ago work had begun to return what had been conifer plantation to bog, and 40 kilometres of ditches were blocked at 100-metre intervals by zigzag sheets of recycled plastic with the addition of bales of peat and heather. As the water levels rose, sphagnum mosses and Sundews *Drosera rotundifolia* appeared, as well as Cotton Grasses *Eriophorum spp* and White Sedge *Carex curta*. Some Birch had been left and seems able to survive the wet, making a useful habitat for perching birds and insects.

Steve Sankey's farm was now in sight. He is an enthusiastic breeder of Shetland cattle. Originally from Norway they are small, sturdy [and friendly] beasts of variable hue. He has 17 at present and hopes to expand the herd. They are excellent conservation grazers, happily existing on coarse grasses and rushes and encroaching Birch seedlings. They can remain outside all winter, needing only the addition of hay grown on his own good land. His stubble fields

attracted a flock of 50 Reed Buntings last winter.

Further on, a small pond had been created. Betty Smith and Lesley Fairweather had brought along their pond dipping gear and were able to tell us that there were the larvae of the Black Darter and Common Hawker Dragonflies and the Large Red Damselfly.

For lunch we moved to higher ground in a small area of Birch woodland. We noted signs of Roe Deer, the fungus *Omphalina ericitorum* among the heather, and clumps of Tufted Hairgrass *Deschampsia cespitosa*. All the ferns were Narrow Buckler *Dryopteris carthusiana*. The Moss-side Pow Burn rises near here and Snipe are sometimes seen.

At this point we left the pond dippers behind, and plunged in to the furthest reaches of the moss. Domed peat hummocks dominated here, covered with mainly sphagnum mosses and trailing Cranberry *Vaccinium oxycoccus*. This is true raised bog. It started forming after the first Ice Age and is still actively and slowly growing. The peat layer can reach a depth of 7 metres and it is here on a peat island that the Bog Rosemary *Andromeda polifolia* grows, in one of its most northerly British locations. We saw the plants, none in flower alas, but it was worth the hard slog. Indeed it was what I had come to see.



Bog Rosemary
Andromeda polifolia

Another exciting find was a newly emerged Drinker Moth on its pupa case; we had seen a caterpillar earlier. Baby toads were seen at intervals throughout the day too.

On the way back we met up with the pond dippers at a different pond. It yielded a large black water beetle with a yellow margin *Dytiscus marginalis*, and more dragonfly nymphs, mainly Black Darters, some 4-Spot Chasers and Emerald Damsels. Betty gave us a detailed account of how she could identify the species and whether they would fly this year or next. [See Page 17]

Flanders Moss had turned out to be a really interesting place. You may be wondering why the name Flanders. It could have come from nearby Inchmahome Priory whose monks were of Dutch origin, or it could be a corruption of an ancient word

meaning 'silver bog'. Research is still in progress. Incidentally, in the Autumn edition of the SWT magazine there is an article about the raised bogs of Latvia. Read it and get a feel for what we have lost and are now trying in a small way to recover. The SNH leaflet *Land of Water* about Flanders Moss is also well worth reading

Jean Murray

SEAFIELD MOSS

| | |
|---------------|---------------|
| <u>Date</u> | 3rd July |
| <u>Leader</u> | David Adamson |

This is a story about a butterfly and a midge. The butterfly is the Greater Butterfly Orchid, its Latin name *Platanthera chlorantha*. I would like to be able to write that the midge is a Midge Orchid, if such a plant exists. [Oh, yes it does; see page 72.] I can write that, of course, but it would be untrue. The midge is just the midge: the biting midge, probably the female of its species. Unlike the Orchid, which is stately and solitary, a radiant tower of cream flowers, the wee midge belongs to a troublesome tribe that exists to torment those who come upon the Orchid.

The butterfly and the midge both live in Easter Inch Moss, Seafield, a patch of regenerating dereliction between the shale bings and industrial estates of West Lothian. The motorway is no distance away, and the empty shells of Motorola and NEC look across at the Moss in anticipation. Once people worked on the Moss, and the railway line that took away the peat has become the route of a neat cycle path. The Moss didn't die when the industry moved away; it discovered new life as a peat moss bereft of most of its peat. People still go to the Moss. The motor bikes churn a track through the bit beside the flats of Blackburn, and I've seen someone carrying an air rifle, though there's nothing much to shoot. The new life is Nature moving back in, doing so in a quiet slow way.

Now the Moss must have already been a bit rich by the late 1980s because Moonwort *Botrychium lunaria* is listed by Jackie Muscott as growing there; it's in the 1989 Checklist for the Vice-county. The Moonwort is still there, a strange fern with a chestnut spike covered in spores and protected by a wavy green shield. We found four of them, and there are more. Grim the Collier, Fox-and-Cubs *Pilosella aurantiaca*, call it what you will, dots the waving grass with deep orange flowers; a garden escape, but a pretty one. The Orchids are pink or purple, conical or cylindrical, Common Spotted *Dactylorhiza fuchsii* or Northern Marsh *D. purpurella* or a bit of both. There are so many that you don't get excited after a while. Yellow Rattle *Rhinanthus minor*, Cotton Grasses *Eriophorum spp*, some nice moths, a frog or

two, a Whaup; all are part of this richness.

The Butterfly Orchid stood by the side of the path, waiting for us to discover it. George found it, and as we admired it and wondered at its solitude the midges attacked us and tried to drive us away, like ants defending their queen. Later, when the midges had done their worst and the itching ended, we remembered the Butterfly with affection as the best of the new life of Easter Inch Moss.

RIVER ESK, LOANHEAD

David Adamson

Date 10th July
Leader Margaret Perry

On a sunny evening, 9 of us made our way past Loanhead's historical monuments to mining and to its brass band tradition, across the decorative town square and down a winding, narrow road to the river. Here we had a leisurely stroll along a narrow, well-kept path beside the river bank. The bank was lined with the verdant foliage of Butterbur *Petasites hybridus*, Sweet Cicely *Myrrhis odorata* with its prominent, blackened seedpods, and Common Hogweed *Heracleum sphondylium* topped by its attractive, pink-centred white umbels. After half a mile or so, the path turned away from the river to run alongside a Buttercup meadow where horses from the nearby riding school were grazing. To the right was a patch of fairly unkempt land containing large stands of Giant Horsetail *Equisetum telmateia*, a rarity in Scotland. We had a splendid view of a Great Spotted Woodpecker climbing the bare trunk of a relatively leafless tree.

The path was later hemmed in by tall banks of shoulder-high grasses. Of particular note were Reed Canary-Grass *Phalaris arundinacea* growing among Giant Fescue *Festuca gigantea* and False Oat-grass *Arrhenatherum elatius*. A few flowering plants were still in bloom. They included Hedge Woundwort *Stachys sylvatica*, Dame's Violet *Hesperis matronalis*, Common Spotted Orchid *Dactylorhiza fuchsii*, Ragged Robin *Lychnis flos-cuculi*, Lesser Stitchwort *Stellaria graminea* and, on an old wall further along the route, clumps of Fairy Foxglove *Erinus alpinus*. It was pleasing to find that two plants which were noted on an earlier excursion here in 1998 were still flourishing: the small Shining Cranesbill *Geranium lucidum* under the fence of a private garden; and the larger Hedgerow Cranesbill *Geranium pyrenaicum* growing on the banked verge of the main road back to Loanhead. Welshed Thistles *Carduus crispus* were abundant on this bank. To complete the walk, we passed by Linden Cottage, marked by a plaque to the acclaimed botanist, George Forrest (1873-1932) who left the cottage in 1904 on his first botanical expedition to China.

Margaret Perry

WOODHALL DEAN WILDLIFE RESERVE

Date 13th July
Leader Jackie Muscott

So much to learn and so little time to do it in! That was the feeling amongst the group of 20 botanical enthusiasts who completed the circular walk at the 60 hectare SWT reserve at Woodhall Dean, near Spott in East Lothian. Thanks to the foresight of Bob Smith this route, with its bridges and steps, allows access into the central area of Sessile Oak woodland. The Weatherly and Woodhall Burns have created large gorges, and these shaded, moist areas allow numerous ferns, mosses, liverworts, lichens, fungi and tall grasses to grow. In addition to the large number of mature trees, many young Scottish native saplings have been planted in the last 10 years and have been looked after by hardworking volunteers.

With the sun shining and Jackie Muscott leading, the day was set for excitement. The variety of grasses at the start of the walk was challenging to those botanical beginners, but with odd names such as 'hairy knees' for Creeping Soft Grass *Holcus mollis*, distinctive smells such as that of Sweet Vernal Grass *Anthoxanthum odoratum* and the great height of the handsome, rare Wood Fescue *Festuca altissima*, the learning process became a little easier. The musical background was a mixture of warblers, such as Blackcap, Chiffchaff, Willow Warbler and Whitethroat, with Goldfinch, Yellowhammer and Buzzard joining in from time to time.

The family party of Long-tailed Tits were heard before they were seen as we searched for Moschatel or Town Hall Clock *Adoxa moschatellina*, the leaves of which were still in evidence.

While some of the group were admiring the clump of Wood Vetch *Vicia sylvatica* above the old packhorse bridge and others were investigating another one halfway down a landslide, the rest had found a section of accessible riverside where Enchanters Nightshade *Circaea lutetiana*, Scaly Male Fern *Dryopteris affinis* and Sweet Woodruff *Galium odoratum* were examined.

A little walking progress was made thereafter as the path led through Woodrush *Luzula sylvatica* and Bracken *Pteridium aquilinum*, so dense that competition was negligible. The Badger sett was duly admired but it was the bright yellow fungus, Chicken of the Woods *Laetiporus sulphureus* that held the attention of most of the group. The dappled shade resulting from the Oak woodland uniform canopy encourages the growth of such fungi.

An influx of midges at Tinker's Leap meant that lunch was curtailed, but not before Wall Lettuce *Mycelis muralis* was observed at the side of the river along

with the fungus Dryad's Saddle *Polyporus squamosus* and various lichens, including the rare *Gyalecta ulmi*. Scented Liverwort *Conocephalum conicum* was also present.

128 steps led the party out of the midges into clear blue skies and a welcome breeze. For those in need of a rest, a welcoming bench, dedicated to Bob and Betty Smith, allowed any fatigue to pass, and the presence of Honey-scented Rust *Puccinia punctiformis* on Creeping Thistle, along with smut *Ustilago violacea* on Lesser Stitchwort gave many of the group a new insight into fungal problems.

For those less well acquainted with grasses, the path permitted a faster pace, and those interested in trees could see that a mixed native hardwood forest was taking shape. This extension to the reserve includes many Sessile Oaks, grown from acorns collected from Woodhall Dean. Although many of the trees were planted in 1994, problems with drought, weeding, Voles and Roe Deer has meant a lot of replanting.

The Ringlet Butterflies still enjoy the open glades, and the song from the Skylarks showed their appreciation of the open area. The adjoining arable field contained Scarlet Pimpernel *Anagallis arvensis* and Bugloss *Anchusa arvensis*.

The circular path rejoined the main path by the bridge just above the confluence of the Weatherly and Woodhall Burns, and after some distance a short-cut was taken outside the reserve leading to a pond, dug by the farmer to irrigate his potatoes. The presence of New Zealand Willowherb *Epilobium brunescens* was noted and added to the list of Willowherbs - American *E. ciliatum*, Broad-leaved *E. montanum* and Great Hairy *E. hirsutum*. A waterfall of sparkling yellow Rock-rose *Helianthemum nummularium* was observed on the nearby rocks. However the dazzling colour from several Common Blue Damselflies *Enallagma cyathigerum* at the edge of the water gave a fitting end to a very stimulating day.

Lots of thanks go to Mary Tebble for her records and to Jackie Muscott for arranging the trip, keeping everyone up-to-date with the findings and handing in a complete botanical record of all that had been observed at Woodhall Dean that day.

Lesley Fairweather

QUEEN'S PARK

Date
Leader

17th July
Margaret White

This evening was cloudy but dry, good weather for this summer. Twelve members of the NATS and two Americans from California who had seen the programme, gathered at Holyrood car park. The intention was to walk through Hunter's Bog and then up onto part of the Queen's Drive to look at some of the interesting plants there. A good tar macadam track led off and this yielded the most interesting find when caterpillars of the Peacock Butterfly were noticed on nettles - beautiful velvety-black caterpillars with tiny white spots.

In the 1850s Prince Albert had Hunter's Bog drained, the water being used to create the ornamental St. Margaret's Loch. The Bog has now been allowed to revert to its natural state and a pond has been created in the valley. According to the Ranger this pond has many toads and frogs, and at least one newt. The plants growing in and around it - horsetails, rushes, sedges etc. - kept us well occupied. Adder's Tongue *Ophioglossum vulgatum* seems to have adopted this bog as its special place, a count of some 34,000 plants having been made, with the Rangers still counting further up the hillside. Although the grasses were long everyone saw this little fern with its single sterile blade and fertile spike with sporangia on either side. The shape of the plant supposedly resembles a



Adder's Tongue
34000 of them!

snake's tongue and this led to the belief that it offered an antidote to snake's bites. In the 1830s the garrison at Edinburgh Castle used this area for firing practice and in 1858 four rifle ranges were established. Unfortunately this resulted in spent bullets being found in the gardens in the Newington district! Wisely the direction of fire was altered to across the valley and a red flag was flown at each end when firing was in progress. The ranges were used by volunteers, the Territorial Army, the Cadets and during the war, by the Home Guard. They were abandoned in 1948 and dismantled in 1961. Traces of the firing platforms can still be seen and for many years the ground round the targets was bare because of the accumulation of lead in the soil. A Fulmar circled overhead and settled on the crags. Hundreds of caterpillars of the Cinnabar Moth were found on some of the Ragwort plants.

On Queen's Drive, the Ranger had pointed out about 3133 pupae of the Six-spot Burnet Moth. The caterpillars hibernate through the winter and resume feeding in the Spring. Their food plant is Birdsfoot Trefoil. They pupate in whitish or yellowish cocoons spun high on grass stems. The pupa is black and shiny and we could see this in the cocoons where the moths had already emerged. Many had hatched and there were pairs of moths on the rocks and on the grass.



Six-spot Burnet Moth

Moving on we found many flowers on the sides of the road: Rest-harrow *Ononis repens*, Bloody Cranesbill *Geranium sanguineum*, Common Storks-bill *Erodium cicutarium*, Burnet Saxifrage *Pimpinella saxifraga* and many others. There was Black Spleenwort *Asplenium adiantum-nigrum* growing on the wall and Maidenhair Spleenwort *A. trichomanes* and Wall-rue *A. ruta-muraria* on the rocks. We were pleased to find several clumps of the rare Forked Spleenwort *Asplenium septentrionale*.

The light was fading as we returned by the Volunteers' Walk to the car park.

Margaret White

ABOUT PEEBLES

Date 20th July
Leader Eric and Eileen Perry

Not a brilliant summer morning; but at least it was dry when the party (more than 20 NATS) gathered in Peebles.

The outing started with a leisurely walk to look at the splendid old trees in the grounds of Kingsmeadows House. Then the route took us across Priorsford Bridge and along the path on the north side of the Tweed towards Innerleithen. By the river there were many standard water plants: Valerian *Valeriana officinalis*, Water Forgetmenot *Myosotis scorpioides*, Marsh Ragwort *Senecio aquaticus*, Yellow Flag *Iris pseudacorus*, Branched Bur-reed *Sparganium erectum*, Marsh Marigold *Caltha palustris*, Monkey-flower *Mimulus sp* and a little more unusual (at least to the Lothian dwellers) Marsh Yellowcress *Rorippa palustris* and Wood Clubrush *Scirpus sylvaticus*. There was also a woodland grass Bearded Couchgrass *Elymus caninus*. Later on, from our lunch spot, we could see an extensive patch of Giant Bellflower *Campanula latifolia* on the opposite bank.

The path leaves the river and for a short distance follows the pavement by the side of the main road. We found Various-leaved Fescue *Festuca heterophylla* by the road and in the wood. This introduced grass was last seen at Lauriston Castle. The next section of the path took us into a community woodland and skirting the sewage works, we proceeded back down towards the Tweed.

We were in sunshine when we came to an interesting area with a good variety of plants and young trees. Noted here were other introductions, including Blue Sow-thistle *Cicerbita macrophylla*, Garden Lady's Mantle *Alchemilla mollis* and Teasel *Dipsacus fullonum*. We also had a splendid view of a Great Spotted Woodpecker on an electricity pole.

Earlier in the day Swifts flew around. There were Goosanders on the water; a Buzzard and a Kestrel were spotted overhead; and House Martins were seen.

Unfortunately the rain came as we were on our way back to Peebles, so the porch at Kilcreggan was littered with muddy boots and wet rainware while we accepted the kind hospitality offered and drank tea with our hosts. Thank you Eric and Eileen. We always enjoy our visits to Peebles.

Lyn Blades

CRAMOND ISLAND

Date 24th July
Leader Janet Watson

During a week of poor weather we were fortunate in having a dry, clear evening for our visit to Cramond Island, which can be reached on foot by a causeway, about two and a half hours on either side of low tide. It took nearly half an hour for the party of twenty-seven to walk to the island, which covers an area of about 19 acres. There was Scots Lovage and Sea Campion on the shore and some nice smutty False Oat Grass. It was interesting to see such dense and tall vegetation, covering the whole island from the beaches on the west to the more rugged eastern side, through which paths have been forged. We were walking through Rosebay Willowherb, Hemlock, and Hogweed taller than we were. There were Sycamore trees in abundance, to such an extent that it was difficult to see the remains of a substantial farmhouse.

The northern end of the island has the remains of wartime huts which would afford good shelter if needed. The views of the Bridges and the Fife coast were spectacular from there.

We wound our way back nearer the eastern side, through tall Selfheal, Russian Comfrey, Yarrow, Raspberries, Ragwort, Harebells.

We finally arrived on the small hill and gazed again at the wonderful view of Edinburgh and westwards across the enormous area of sand and mud, but against the light it was difficult to identify the birds, apart from Terns and Eider Ducks and Pipits on the island itself. Just below the summit was an enormous cluster of Honeysuckle. Story has it that many years ago unmarried girls of genteel birth who became pregnant were sent to the island for their confinement.

We picked up lots of Tower shells and returned along the causeway and alongside the concrete pillars which were erected during the war to prevent German submarines or small ships from going up the Forth.

Janet Watson

BARA WOOD AND HOUSE

Date 27th July
Leader George McDougall

A fine warm day, a fine venue, and our thanks are due to the Younger family for such generous access, and to our leader for arranging the outing. There were 25 attending plus 'Wykie' the dog. The house was designed by the architect Reginald T.J. Fairley on traditional lines and was completed in 1940. The name Bara has a long history, the former Parish Kirk of 'Barow' having been consecrated in 1242. It was subsequently merged with the parish of Garvald in 1743. The scant remains of the church and churchyard are now heavily overgrown and were not included in the present excursion.

Our itinerary took us around the semi-formal house gardens and from there down a very pleasant 250 metre long valley/lawn which was bordered and dotted with a fine mix of native and introduced trees. Being planted around the same time as the house was built, the

trees were in their early prime giving a more than usually open aspect to the park. From here a path led down through Bara Wood to the loch. Unfortunately, just having been drained for maintenance (and refilled), this was somewhat lacking in wildlife interest. However there were a few Common Blue Damselflies to be observed, with Jointed Rush *Juncus articulatus*, Hard Rush *Juncus inflexus*, Branched Bur-reed *Sparganium erectum*, Yellow Iris *Iris pseudacorus*, and some very handsome Elecampane *Inula helenium*, around the margins. [Remember Margaret White's informative article in last year's Journal.]

After lunch, and after visiting the ruins of a water driven sawmill complete with mill pond, we completed the circumnavigation of the loch along a woodland path. Among the plants encountered were Wood Spurge *Euphorbia amygdaloides*, Square-stalked St. John's Wort *Hypericum tetrapterum*, Pink Purslane *Montia sibirica*, Lords and Ladies *Arum maculatum*, Sanicle *Sanicula europaea* along with both Male Fern *Dryopteris filix-mas* and Lady Fern *Athyrium filix-femina*. Fungi noted were Artist's Fungus *Ganoderma applanatum*, Oyster Fungus *Pleurotus ostreatus*, Hairy Stereum *Stereum hirsutum*, and Larch Bolete *Suillus grevillei*.

In the open grassy areas were found Common Spotted Orchid *Dactylorhiza fuchsii*, Northern Marsh Orchid *Dactylorhiza purpurella*, Upright Hedge Parsley *Torilis japonica* and Cut-Leaved Cranesbill *Geranium dissectum*. The ungrazed grassy areas were well endowed with insect-friendly 'weeds' and lots of Ringlet Butterflies and Soldier Beetles were seen. Also seen were single individuals of Yellow Shell Moth, Six-spot Burnet Moth and Brimstone Moth. The fungus *Panaeolus sphinctrinus* was identified but no one could or would name a nice ruby-red *Russula*.

Finally the company reassembled near the top of the lawn, and since by this time it was very warm and sunny, the whole group by one accord sat or lay on the grass for a good long time and talked of many things.

John Watson



Miss R. Orrock discoursing on Botany.
Drumshoreland, 23rd July 1898



Mr G. McDougall discoursing on Botany.
Bara Wood, 27th July, 2002

HERIOT WATT UNIVERSITY AND UNION
CANAL

Date 31st July
Leader Graham Swift

It had been such a wet day that it was surprising that six members under the leadership of Graham Swift met at the Heriot Watt University in the evening. By then it was dismal and misty, but not quite raining, and more like a November day. We walked through the grounds of the University, admiring the trees, and crossed over the A71 and so on to the canal towpath where we headed eastwards and were immediately rewarded by a fleeting glimpse of a Water Vole, now quite a rarity. We saw Sow Thistle, Tufted Vetch, Cranesbill, Convolvulus and Hedge Parsley and were delighted where we turned off the canal to see the Turk's Cap Lily *Lilium martagon*, a rare find indeed. We turned on to the road and returned to the University via the old road through Hermiston, where we admired the houses which now enjoy peace and quiet since the main road was diverted. A most enjoyable evening.

Janet Watson

UNION CANAL AND FALKIRK WHEEL

Date 10th August
Leader Sandra Stewart

We set off by train for a change, from Waverley to Falkirk High, which is right beside the Union Canal, which runs parallel to the motorway, which follows the line of Antonine Wall (142 AD). It is interesting that the Romans chose the same line as the canal, railway and motorway, 2000 years apart.

| | |
|-----------------------|--------|
| Antonine Wall | 142 AD |
| Forth and Clyde Canal | 1795 |
| Union Canal | 1822 |
| Railway | 1842 |
| Motorway | 1960s |

The Forth and Clyde Canal ran from Grangemouth on the Forth to Bowling on the Clyde and was a major commercial route in the days before road transport. The Union Canal, on the other hand, was not built for ocean-going vessels and was never a commercial success. Both were closed in the 1960s after pressure from local communities. These same communities were the driving force behind the British Waterways plans to revitalise the corridor, with Millennium funding.

In the 18th century the two canals were linked at Port Downie, Falkirk by 11 locks, long since filled in. It was decided not to replace the locks but to extend the

Union Canal by half a mile and construct a tunnel under the Antonine Wall and railway line, then take it by aqueduct to a rotating wheel. This is a revolutionary idea commissioned by British Waterways, to lower the level of the Union canal to that of the Forth and Clyde Canal. The Millennium Link Project included the restoration of both canals.

We walked along the Union Canal to the new lock, then followed the towpath under the Antonine Wall and railway, and emerged to a spectacular view along the new aqueduct to Ben Lomond, Ben Vorlich and the Ochil Hills. It was a beautiful day and we wandered down to a grassy bank, beside the Visitor Centre overlooking the canal basin, giving us a splendid view of the Falkirk Wheel slowly turning in the sun. It is majestic; a boat sails in at the bottom level at the same time as others go in at the top; the wheel turns and the top one arrives at the bottom, while the other reaches the top. A neat idea!

We hadn't booked so had to be content to watch, because being a lovely Saturday, the demand for hurls was high.

After lunch we had a leisurely amble along the Forth and Clyde Canal. There was lots of interest along this stretch, including Water- Plantain *Alisma plantago-aquatica*, Frogbit *Hydrocharis morsus-ranae*, Arrowhead *Sagittaria sagittifolia* and Lesser Reed-mace *Typha angustifolia*, all of which are quite unusual in Scotland.

The afternoon finished with tea in the garden of the old Union Inn at Port Downie.

Sandra Stewart

MENSTRIE GLEN

Date 17th August
Leader Frances and Munro Dunn

The weather smiled on the NATS again when they gathered near the old castle at Menstrie for an assault on Menstrie Glen. It's a pity that houses have been built all round the castle, and it was annoying that a car was parked right in front of it, spoiling the olde worlde photograph I was trying to take. However we were soon making our way up into the Ochils under the eyes of a pair of Buzzards. It seems impossible to have an outing without Buzzards these days - they definitely seem to be on the increase.

We were soon encountering some interesting plants too. In dry ground by the path was a nice patch of Haresfoot Clover *Trifolium arvense* and an amazing amount of Smiths Pepperwort *Lepidium heterophyllum*. It's the commoner Pepperwort in Scotland, identified by its purple anthers and the long-

styled seed. The Field Pepperwort *L. campestre* which has yellow anthers and a short style, is rarely found but there's a colony at Uphall Station.

Prickly Sedge *Carex muricata* ssp *lamprocarpa* was also growing beside the path. It's the second time the NATS have seen it this year (the first time at Garleton Hills), and I've recently seen it in Holyrood Park. I gather it's been around there for some time, but seems to be on the increase; maybe it likes the warmer winters.

Watercress was fruiting in one of the ditches, and this too was of interest as it appeared to be the double-rowed species, true Watercress *Rorippa nasturtium-aquaticum* rather than the single-rowed Narrow-fruited Watercress *R. microphylla* which is the common Watercress of the Lothians. *R. nasturtium-aquaticum* has short fat seed pods which contain two rows of seeds side by side, while *R. microphylla* has longer narrower pods with a single row of seeds, or if two rows, they are staggered so that they pack into the narrower pod.



*Rorippa
nasturtium-aquaticum*

Rorippa microphylla

Watercresses

Other attractive plants of the damper places included Ragged Robin *Lychnis flos-cuculi*; Quaking Grass *Briza media*; Fen Bedstraw *Galium uliginosum* which is almost as sticky as Sticky Willie *Galium aparine*; and Bristle Clubrush *Isolepis setacea*, a funny little member of the Sedge Family.

We descended to the wooded banks of Menstrie Burn for lunch. Here were woodland plants like Dogs Mercury *Mercurialis perennis*, seeding well, and the distinctive woodland grass Wood Melick *Melica uniflora* tucked away under a shady bank. Young Paul went exploring up river and discovered a dark pool above a waterfall, fed in turn by a chute of water from above. Very atmospheric, but a bit of a scramble to get to see it.

After lunch we crossed to the west side of the river for the return journey. Near the bottom of the path we encountered another little plant which likes dry ground

- Birdsfoot or *Ornithopus perpusillus*. It's a tiny annual, a member of the Pea Family. The patches of leaves looked at first glance like well-trodden Heath Bedstraw, but the leaves are pinnate not whorled, the flowers are pea-shaped and the fruit is a curved pod with constrictions between the seeds - very elegant.



Birdsfoot

Ornithopus perpusillus

Meadow Brown Butterflies were flying in the long grass and Grasshoppers were chirruping away, while the presence of the midge *Jaapiella veronicae* could be deduced from the hairy terminal galls on the Germander Speedwell *Veronica chamaedrys*. The rather similar galls on Wild Thyme *Thymus polytrichus* are caused by a mite belonging to the *Eriophyidae*, as are the pimply galls we found on the leaves of Alder *Alnus glutinosa*.

As we headed towards Menstrie, Green Woodpeckers were seen by some of the party, heard by others. And back in the village, the bridge over the burn was found to support a fine collection of Spleenworts - Wall Rue *Asplenium ruta-muraria*, Maidenhair Spleenwort *A. trichomanes*, and the rather less common Black Spleenwort *A. adiantum-nigrum*.

To round off proceedings some members of the party set off for nearby Blairlogie to slake their thirst at a newly-opened teahouse before starting for home.

Jackie Muscott

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

QUEEN'S PARK BATS

Date 21st August
Leader Natalie Taylor

The greatest fear of anyone leading a bat walk is the weather. Bats are very sensible little creatures that usually won't come out if it is wet, windy or cold – could explain why none usually attend NATS excursions! So my relief was great when the nice weather we'd had through the day lasted, giving a calm, dry and warm evening. The only downside to this lovely weather was the long time it took to get dark enough for the bats to emerge. A group of 20 NATS assembled in the broad pavement car park in Holyrood Park, and remained there for the best part of an hour waiting for darkness to fall. The time was filled with bat chat; we discussed the different species found throughout the world, from the biggest Fruit Bats with wingspans of six feet, to the smallest bat, the Bumblebee Bat, that has a wingspan of just six inches and weighs less than a 1p coin! Of the 16

resident bat species in Britain, 8 are found in the south of Scotland; of these the Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *P. pygmaeus*, Daubenton's *Myotis daubentoni*, Natterer's *M. nattereri*, and Brown Long-eared *Plecotus auritus* Bats are found in the Edinburgh area. Until only 3 or 4 years ago the two Pipistrelle species were considered to be a single species; only after field observations of differences in colour, echolocation frequency, facial marking, roost size and habitat were supported by genetic study were the two species separated. We hoped to see and hear two of the five that night, Soprano Pipistrelle and Daubenton's; we were not to be disappointed! During a quick introduction to the workings of bat detectors, the sudden appearance of a Pipistrelle flitting over our heads from the trees in the Palace grounds, signalled that the time had come to start our walk. We headed along the edge of the parade ground towards St Margaret's Loch, hoping to see, and hear on the bat detectors, Pipistrelles hunting along the lines of the trees.

Although bats are not blind as the old saying would have them, they do not use their eyesight to get about in the dark, but rather use echolocation, a sort of sonar. The majority of the echolocation calls are out of our hearing range; however bat detectors can be used to listen in on the bats' navigation. By using a bat detector these ultrasonic calls can be made audible to human ears. Not many bats were seen or heard as we walked by the trees, much to the leader's consternation! However, once we arrived at the loch the bats put on a show that was more than any of us had expected. Standing as we were in a slight clearing between the trees at the water's edge, we were treated to amazing aerial displays by the Pipistrelles zooming about our heads (no, none got caught in anyone's hair – that's another myth!), and the Daubenton's skimming low over the water. Not only were we able to listen to the bats on the detectors, but also to see them, using a powerful lamp to follow their paths across the loch.

After watching in awe the fascinating behaviour of the bats for nearly an hour, we finally, and somewhat reluctantly, decided that we should call it a night – but, oh, what a night!

Natalie Taylor

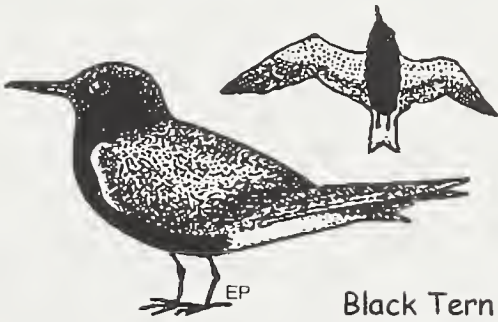
ABERLADY BAY

Date 24th August
Leader Bill Clunie

This outing took place on a brilliant day of sunshine, one of the sunniest days of a wet summer. About thirty-five members met in the car park by the Timber Bridge. The tide was far out, little wind, sun shining in a cloudless sky.

Birds we saw here included a Greenshank feeding beside the river; a Buzzard rising over Luffness Links Wood; a flock of Lapwings flying in from the firth to join the hundred or so already there; eight or nine Herons standing singly on the sand. We went along the road towards the village. Here, another Greenshank (possibly the same bird) was seen.

As we walked out to the sea, from the bridge, the only notable sighting was of a Whitethroat perched briefly on a Hawthorn. Soon, however, we heard screeching and creaking, and saw at the tide-line a group of about twenty-nine Sandwich and Common Terns, with as many gulls. Bill spotted a more unusual Black Tern in the 'scope. Several Sanderlings dashed about Gullane sands at the tide-line. Less attractive were various uninteresting gulls.



Black Tern

Lunch stop was at Gullane Point. Those who were paying attention to the sea, saw two Razorbills, and some Guillemots; about fifteen male Eiders in eclipse, with females and large young; a few Gannets out to sea; Terns overhead. Bill, more observant, saw among other birds, Common Scoters; three Red-necked Grebes; one Red-throated Diver; Kittiwakes and Fulmars. He also saw Sand Martins and a Common Sandpiper in flight.

After a short stop at the Hummel Rocks, we made our way back by Gullane Links. Flowers we had seen so far included Sea Aster *Aster tripolium*, Black Horehound *Ballota nigra*, Peach-leaved Bellflower *Campanula persicifolia*, Marjoram *Origanum vulgare*, (both perhaps, garden rejects), Yarrow *Achillea millefolium*, Sneezewort *A. ptarmica*, Catsear *Hypochaeris radicata*, much Grass of Parnassus *Parnassus palustris*, Centaury *Centaureum erythraea*, Rest-harrow *Ononis repens* and Frog Orchid *Coeloglossum viride* all in flower; Autumn Gentian *Gentianella amarella* about to flower.

At the convergence of the paths we met four of the party who had spent the morning on the salt marsh and dune slacks. Their plant list was interesting: Sea Spurrey *Spergularia media*, Field Gentian *Gentianella campestris*, Marsh and Lady's Bedstraw *Galium palustre* and *G. verum*, Knotted Pearlwort *Sagina nodosa*, Fairy Flax *Linum catharticum*, Wild Basil *Clinopodium vulgare* and Fleabane *Pulicaria dysenterica*, among others.

All together we proceeded slowly back to the car park. In a marshy pool beside the path, we were delighted to be shown strange Bladderwort *Utricularia vulgaris* in bloom. In this pool too was Marsh Lousewort *Pedicularis palustris*. But the real rarity for the Lothians (certainly I don't remember seeing it before), was an umbellifer, Lesser Water Parsnip *Berula erecta*.

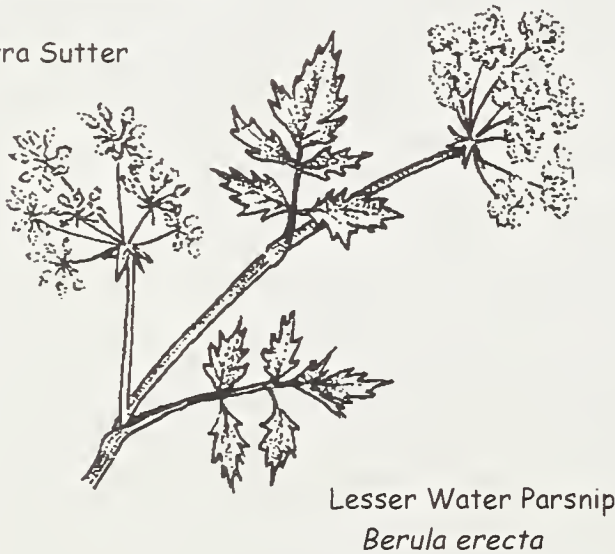
Butterflies, too, appeared to be enjoying the sunshine and flowers: one Painted Lady, Common Blue, Small Heath, Meadow Brown, Small Copper, Red Admiral, Green-veined White and other Whites were seen. Very many Peacock Butterflies were spread out on the Sow Thistle *Sonchus* sp. flowers, resting or feeding.

It was a good day for Dragonflies; masses of the Common Darter Dragonfly *Sympetrum striolatum*, with large numbers laying their eggs on the Marl Loch and on small ponds; Blue-tailed Damsels *Ischnura elegans*; Common Blue Damsels *Enallagma cyathigerum*; and Emerald Damsels *Lestes sponsa* including a pair thinking about mating.

Many thanks are due to Bill for a very enjoyable outing. I'd also wish to thank Jackie Muscott, Mary Tebble, Mary Robertson, Margaret Mowat and the other members who spotted and/or identified flowers and insects.

It was an idyllic day.

Myra Sutter



Lesser Water Parsnip
Berula erecta

VOGRIE COUNTRY PARK

Date 7th September
Leader Bill Baird

The members met in the top car park at Vogrie at 10.30 hrs. The first visit was to the walled garden which once produced all the fruit and vegetables for Vogrie House. Using an ingenious system of boilers and flues, which channelled the warm air up through

the cavity between the double walls, fruit such as figs and peaches could be grown in the green houses leaning against the walls. The main use of the walled garden is now to enable the Council gardeners to produce plants and flowers for Council displays and events throughout Midlothian. Before we left the garden we observed wild bees going to and from a hive near the top of the hollow wall. As far as anyone can remember this hive has been in occupation at this site for at least forty years. On one occasion when a capstone was removed from the top of the wall a huge mass of honeycomb could be seen before the capstone was hastily replaced.

From the walled garden we walked down through a Rhododendron walk into the mown grassland of the policies around Vogrie House. The finest of the Rhododendrons are the tree-sized hybrids *R. arboreum* x *R. campanulatum*, which form a cascade of pink in April. As we examined a large Acer by Vogrie House a sharp-eyed member pointed out that it bore two different shapes of key. The staff at Vogrie are well aware that there are many rare, strange and odd trees around, such as this one, which are continually surprising them. The group walked along Beech Walk and examined the large and varied fungal display in this area. There were several different species of *Russula* including *R. mairei*, *R. ochroleuca* and *R. nigricans*.

After lunch we descended the embankment to Vogrie Burn and proceeded upstream. The going was extremely difficult and slow, but very interesting as this site is rarely visited, and secluded. At the bottom of the gorge conditions are rather damp and many lichens, liverworts and mosses were seen. The liverworts included the Scented Liverwort *Conocephalum conicum*. The geology of the area is well displayed in the steep banks of the burn and the group was able to examine the various types of rock, such as sandstones and shales, associated with coal seams. At least two coals, the Parrot and Kailblades have been recorded from this location which means that the age of the strata in the gorge can be defined as Lower Limestone Group. At a bend some halfway up the section there is a superb feature showing folded and distorted rocks. This exposure is a text book example of the movement and pressures to which rocks are subjected, and displays how they react by deforming to accommodate them. Towards the uppermost end of the section we saw where a trial tunnel had been dug into the cliffs looking for coal, possibly the Kailblades. At the same site we found the Carboniferous fossil root *Stigmaria* which demonstrates the previous existence of the Coal Measure forests.

After a scramble up steep banks we returned safely to the car park and the end of the excursion.

Bill Baird

A NATS challenge at Vogrie!

In the morning the walking was easy. We examined the walled garden and saw the little hollows in the bark of the Wellingtonia where Treecreepers spend their nights. Picnic lunch was eaten above ground in relative comfort; but in the afternoon the serious business began. It might be said that the NATS were being used as guinea-pigs! Bill says our afternoon route was 'very difficult'. Yes! We plowtered along the burn over fallen trees, doing our best to avoid large patches of nettles, but everyone thoroughly enjoyed the challenge and I'm sure that a party of geologists would do likewise. One comment made was to the effect that future NATS outings would seem dull after Vogrie!

Lyn Blades

YELLOWCRAIG

Date 14th September
Leader Mike Richardson

In a summer darkened by the death of a close friend, the serious illness of a neighbour's son, and even the loss of a pet guinea pig, there have been times when the spirit has needed some positive inspiration to restore its proper balance. I think it was Percy Unna (who left money to the National Trust for purchase of land such as Glencoe) who believed in the healing power of contact with the natural world, and thought that even a monster like Stalin could be changed for the better if only he could be persuaded to take a walk in the Scottish hills.

The natural world is particularly rich at Yellowcraig. It may lack scenic grandeur and be blighted by dog fouling, but its biodiversity rivals that of any site of comparable size in the Lothians, Aberlady perhaps excepted. At first this is not at all apparent; the woods seem to be Sycamore and more Sycamore, the ground flora all Stinging Nettle, and the only insect the biting midge. There are a few fungi, but this is a fungus outing so you would expect there to be some around.

After a while you emerge from the midge picnic to the lightness of grassland and sand dunes pitted with stunted Pine trees. At this point you begin to realise why Yellowcraigs pulls the NATS back again and again. There are the bright red *Hygrocybe* fungi forcing their conical caps through the short turf, the small black *Leptonias* so pale under their caps, and

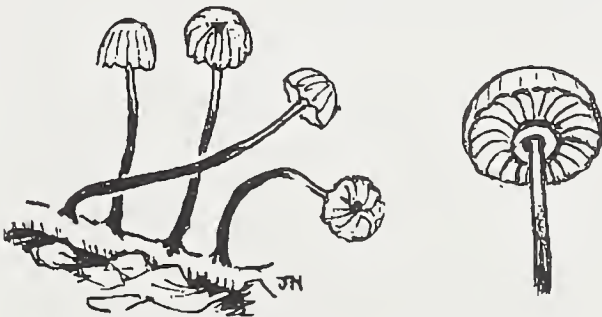


the large *Chroogomphus rutilans* with spindle-shaped stems and great arching gills always near Pine trees. As well as the fungi are the plants and the insects, some familiar, others anything but. For instance Tor Grass *Brachypodium pinnatum* is at home in limestone grassland in Southern England. It was first recorded at Yellowcraigs in 1977 and is now doing very well. Less successful is the Frog Orchid *Coeloglossum viride*, down to some 6 plants from around 100 or more some 20 years ago, but surprisingly in flower in mid-September. Near the Orchid grows a yellow composite Lesser Hawkbit *Leontodon saxatile* and its purple flowered relative Greater Knapweed *Centaurea scabiosa*, while Grass of Parnassus *Parnassia palustris* of the heart-shaped leaves and patterned petals thrives in a damp sedgy area bordering the golf course. With the flowers are some butterflies, grasshoppers, hoverflies and a hairy Fox Moth caterpillar.

The illusion of a place given over to nature is abruptly broken by the unfriendly metal barrier separating the reserve from Archerfield estate. Yellowcraig merges gradually with the rough of North Berwick West golf course on one side, but the high fence of Archerfield has a message of undisguised hostility: Danger; Keep Out. So we botanise along the sandy path between the fence and the Buckthorn, noting Henbane *Hyoscyamus niger* and some Tarweed *Amsinckia micrantha* and also both Black and Green Nightshades, but it takes the absurd sight of a huge potato plant growing through the Buckthorn to dispel the bad taste left by that fence. One wayward member clocked about 100 plants of Scots Lovage *Ligusticum scoticum* along the shore.

I have neglected to mention the leader, Mike Richardson who tolerated our wanderings, both geographically and from the study of fungi. His knowledge and his ability to put over complex details in relatively simple terms, together with the friendly company of the NATS, helped to make this a special outing in special surroundings, and to restore a bit of balance at the end of a fairly traumatic summer.

David Adamson



Marasmius rotula [1-2 inches high]

Among other fungi identified at Yellowcraig were:

Psathyrella gracilis at the beginning; Dead Man's Fingers *Xylaria polymorpha*, Jews Ear, *Marasmius rotula* all associated with wood; Parrot Waxcap *Hygrocybe psittacina*; Puffballs *Bovista plumbea*; Yellow Fairyclubs *Clavulinopsis laeticolor* and *C. luteoalba*; Black Earth Tongue *Geoglossum cookeanum* in the sand. There was a splendid example of an Earthstar *Geastrum triplex* in the Sycamore leaf litter. The highlight of the fungi was *Leucoagaricus leucothites*, a white toadstool looking like *Agaricus* but with white spores.

HOUND POINT

Date 21st September
Leader Tom Delaney

Members enjoyed a lovely, warm Indian summer day at Hound Point with Tom Delaney and his telescope. We were looking for migrants, Skuas in particular, birds returning to the shore, and anything else.

Tom soon spotted Arctic Skuas, unfortunately most of them outwith binocular range. In the estuary were Guillemot, Razorbill, Eider, lots of Sandwich Terns and eventually a Red-throated Diver. Many immature Gannet were fishing in the river, and later on some dead birds were found on the shore, having probably died of starvation as this is the time of highest mortality before the young birds become efficient feeders.

On the shore we had very good views of Whimbrel and Curlew. Tom pointed out the differences and the Whimbrel obligingly called. There was a collection of small waders: Redshank, Oystercatcher, Turnstone and a few Bar-tailed Godwit. We also saw Wigeon.

Some members explored the Dalmeny Estate path as far as Barnbogle Castle from which comes the legend of Hound Point. It takes its name from a ghostly deer hound that, it is alleged, appeared and bayed mournfully before the death of each laird of Barnbogle. An earlier laird, Sir Roger de Moubray, had taken his favourite hound with him to the Crusades and been killed in battle. The old castle was restored in the nineteenth century by Archibald Primrose, 5th Earl of Rosebery.



Other members took note of the flora where we sat, finding Thyme, Harebell, Meadow-rue, Burnet Rose with a hip or two, Cowslip and Field Gentian, as well as a few plants of Purple Milk-vetch *Astragalus danica*. The mycologists were delighted to find 20-30 Blackening Waxcaps *Hygrocybe conica* and 10 or so Parrot Waxcaps *H. psittacina*, both of which are being monitored by Plant Life. There were also the large flat caps of a *Melanoleuca* species which had 'whitewashed' the surrounding grass with its spores.

We saw geese and Swallows on the same afternoon, migrants flying from opposite directions. Late in the afternoon we heard an unusual call which Tom identified as a Diver. We were lucky to see two birds in silhouette against the sky as they flew west; a good ending to a day's satisfactory bird watching.

On a path through Dalmeny Woods from South Queensferry where we had left the cars, I had noticed three plants of Giant Bellflower, also Common Figwort, Wall Lettuce and late-flowering Red Campion, Nipplewort, Hogweed and Yarrow. On the return we noticed the frondose Giant Polypore *Meripilus giganteus* on a rotting tree stump.

The damp walls of the estate were covered in Wall Rue and Maidenhair Spleenwort, while many ferns grew in the shady woodland. Tucked into a sheltered corner behind the retaining sea wall at South Queensferry, we saw Elecampane, still with a few fading-flowers. (see Observations Page 30 22/7). This may have spread by seeds from Port Edgar, site of a long-abandoned garden, where I found it when doing a kilometre square for the new publication *Plants of Edinburgh and the Lothians*.

Obviously we were not all dedicated ornithologists, so special thanks to Tom for his patience, though he showed interest in the botany too.

Mary Robertson

POSTSCRIPT

As we sat in the sun waiting for our turn of a telescope, we noticed three bird watchers who had set up their telescopes on a rocky promontory just west of our vantage point. This would have aroused little interest if we had not also noticed that the incoming tide had turned the promontory into an island. The bird watchers were concentrating on their sea watch and seemed to be blissfully unaware that they had been cut off. Over the course of the next hour or two, I kept going to have a look at the 'castaways', and had a giggle. It was a lovely calm, sunny day and it was obvious they were in no danger - but they would have to wait for some hours for the tide to go out and let them return to dry land.....

WHERE'S THAT LIFEBOAT?



....It was time to go home and our party wended its way back to South Queensferry. Just before we arrived, three people approached us. It was the castaways! The lifeboat, which had been part of a fund-raising display at South Queensferry, had been called out for real to rescue someone stranded on Cramond Island, and had picked up our castaways as well. To our astonishment, we recognised one of them (whose identity I have been dared to disclose). She had intended to be part of our outing but had mistaken our meeting point and in trying to find us had met up with two bird watchers she knew. I gather that the views of Skuas from the 'island' were wonderful!

Mary Clarkson

DUNS CASTLE

Date 28th September
Leader Roy Watling

Two things made the excursion specially memorable. The first was the presence of Roy Watling as leader. His ability to recognise fungi in the field is unmatched, and his wealth of information concerning their characteristics, and tales of their use, intended and unintended, held his audience in thrall.

The weather was cloudy but dry. Despite a considerable period of dry weather most of the area inside the castle estate was moist and still, in some areas, very wet. Fourteen members made up the party.

The second reason for the great success of this outing was the fungi themselves. They were found in large numbers. Starting out along the track off the B6365 at the entry to the SWT Reserve there were at first few large fungi - *Hygrophorus cossus* being an exception - but many rusts, of great interest to the cognoscenti, on the tall herbage on each side of the track. Further on, Shaggy Inkcaps *Coprinus comatus* were numerous, and Weeping Widow *Lacrymaria velutina*, also blackspored, occurred.

The situation changed dramatically as we entered the Colonel's Walk. Walking through mainly Beech wood, *Lactarius* and *Russula* species were abundant and all of those commonly associated with Beech were found in good numbers. Interesting *Boletes* were found, for example the superficially similar *Boletus calopus* and *B. erythropus* (now *luridiformis*) were compared, the former having red reticulation on the stem against the latter's red dots, while the bluing was of a deeper hue with the *B. erythropus*.

Still later in the day, the woods contained very many *Tricholoma sciodes* and a number of *Amanita* species - principally *A. muscaria*, *A. citrina*, *A. rubescens*. There was an interesting diversion at lunch time when the loud calls of a number of Sparrowhawks drew our attention to them above the woodland ahead.

Andrew Gilchrist

KILSPINDIE (BIRDS)

Date 19th October
Leader Noreen Stabler

This was a wonderful sunny autumn day. We started our viewing from the road overlooking Aberlady Bay. The tide was well out so the waders were few - Redshank, Oystercatcher, two Grey Plover, Dunlin, Curlew, lovely flights of Peewit, some Wigeon, Mallard and Shelduck.

We were fortunate in being there on the day when the number of geese reached its pinnacle this season (over 22,200 according to the warden), a mixture of Greylag, Pinkfoot and two! Barnacle, just before they started to disperse south. They "took off" some times, flew around calling, and settled again, but not near enough for a clear view, so we went in search of them in fields where they had been numerous and close the day before. The countryside was beautiful, but the geese preferred the Bay that day.

We went on to Belhaven where we had lunch, watching the tide coming in and waders approaching.

Thereafter we walked towards Seafield Pond viewing closely a similar mixture of the waders and ducks we had seen at Aberlady, but in much greater numbers. At the pond we spotted Pochard, Dabchick, Moorhen, Mute Swan, Cormorant and one Grey Heron, past the pond. In a field by the little bridge, there was a good sized flock of Golden Plover and Lapwing.

Ironically, on the way home we came across a field near Drem of geese grazing. This is part of the fun in goose hunting. They are uncooperative in not remaining where they were recced the day before. However it was a marvellous outing, worth it just to see and hear the large skeins of geese flying at Aberlady Bay.

Isla Wilkie

ALMONDELL COUNTRY PARK

Date 16th November
Leader Janet Watson and Christine Rae

About eighteen members set off from the South entrance at East Calder. We were unable to visit the Calder Wood as the bridge into the area at Mid Calder had been swept away after heavy rain. Instead we walked along the old railway line and over the impressive Telford Viaduct where the top of a large Beech tree had fallen in the recent gales.

We observed the reed beds. It was late in the season for flowers but we saw seed heads of Wild Carrot *Daucus carota*.

Passing Pumpherston Golf course on our left there were some bings on our right on which small trees and plants were growing, and which we thought would make interesting exploration in the summer. We walked at a leisurely pace from East Calder to Uphall Station and between us saw a lot of bird life including a Reed Bunting, a Goldfinch, Greenfinches, a Redwing, Tree Sparrows, a Yellowhammer, a Grey Heron, Wood Pigeon, Tits - Coal, Blue and Great - Carrion Crow, Blackbirds, Robin, Chaffinch, Dunnock, Black-headed Gulls and Herring Gulls. Our pace quickened as we hurried beside the railway line past Roman Camp cottages as the rain came down in earnest and most of us were more interested in finding some shelter for lunch. It happened that it became more or less dry as we arrived back at the Almondell Visitor Centre where we had a late lunch and thereafter made our way back to the start.

Janet Watson

| WINTER MEETINGS | | |
|-----------------|---|--------------------|
| 30 January | Edinburgh Geology and Landscape | David McAdam |
| 27 February | Slugs and Snails | Adrian Sumner |
| 27 March | Scottish Native Tree Tales - a Millennium Award Project | Ian Darwin Edwards |
| 24 April | Members' Night | |
| 25 September | Birds of East Lothian | Richard English |
| 30 October | Annual General Meeting | |
| | Red Squirrels in South Scotland | Sarah Oakley |
| 27 November | My Life with Orca: the Sociable Whale | Erich Hoyt |
| 13 December | Christmas Party and Photo Exhibition | |

PLUS ÇA CHANGE

1902

During the winter session (1901-1902) six indoor meetings of the Society have been held. It is gratifying to state that the attendances have been very satisfactory.

For the summer session twenty meetings were arranged. The season was not, however, favourable for field meetings, two having to be abandoned and four having a specially small attendance owing to the inclemency of the weather. The average attendance for the other meetings was about 15.

Transaction of Edinburgh Field Naturalists and Microscopical Society, Page 400 Vol. IV)

KINDROGAN 2003

The Scottish Field Studies Association which formerly ran Kindrogan Field Centre has now entered into a partnership with the Field Studies Council, who have field centres in England and Wales. This has considerable advantages for Kindrogan. The programmes for the adult courses have been combined, and this will give far wider publicity to the Centre. There will also be benefits for the staff as they will be able to participate in FSC training courses and career structure. The FSC have taken over responsibility for the daily running of Kindrogan but will continue to offer the same range of school, university and adult courses. Some of the quieter periods will be suitable for English school courses with different term-times and this will help to fill the Centre.

The Members' group activities will continue as before, as will the twice-yearly newsletter. Members of the SFSA receive higher discounts on Kindrogan courses than FSC members, so it is still well worth having a personal membership. The Edinburgh Natural History Society has a Corporate membership and all members of the Society are welcome to go on the work weekends held this year on April 25 - 27 and October 17 - 19. These weekends are an enjoyable mixture of working in and around the grounds combined with an illustrated evening talk, bird-watching and a general good time, all at a very modest cost which just covers the expenses. If you would like to come, ask me for a booking form by phoning 0131 552 5026.

Heather McHaffie

| | | | | | |
|-------------|--|-----------------------------|--------------|--|-----------------------------|
| APRIL | | | JULY | | |
| 5 -12 Apr | Lichens | Sandy & Brian Coppins | 15 -18 Jly | Intro. to National Vegetation Classification | Phil Lusby |
| 5 -12 Apr | Drawing and Painting the Springtime Landscape | Sue Murdoch & Brian Thomas | 19 -26 Jly | Drawing and Painting in the Scottish Landscape | Gordon Highmoor |
| 7 -11 Apr | Spring Highland Moths | David Brown | 21 -26 Jly | Life Before the Car | Chris Dingwall & Judi Oates |
| 7 -11 Apr | The Landscape Ecology of the Scottish Highlands | Alistair Headley | 26 Jul-2 Aug | Ants, Bees & Wasps | Mike Edwards |
| 11 - 13 Apr | 'Look Out for Mammals': an Identification Workshop | Mammal Society | 26 Jul-2 Aug | Perthshire Digital Photo Foray | Chris Rowley |
| 18 -21 Apr | Castles and Distilleries | Sheila Wickens & Judi Oates | AUGUST | | |
| 18 -21 Apr | Natural Sculpture | Duncan Watt | 2 - 9 Aug | Freshwater Algae | Elliot Shubert |
| MAY | | | 2 - 9 Aug | Practical Algal Ecology | Eileen Cox |
| 2 - 4 May | Creative Writing | Jane Higgins | 2 - 9 Aug | Castles, Grdns, Distilleries | Robin Noble |
| 2 - 4 May | Garden Structures | Anthea Naylor | 2 - 9 Aug | Plants of Mires | Fred Rumsey |
| 2 - 4 May | Heraldic Woodcarving | Mike Provan | 9 -13 Aug | Water Plants | Nick Stewart |
| 2 - 4 May | Scottish Plants & Gardens | Sheila Brinkley | 9 -16 Aug | Mosses and Liverworts | Martha Newton |
| 16 -18 May | Birds for Beginners | Nick Mutch | 16 -23 Aug | Highland Natural History | Mike Thornton |
| 16 -18 May | Bats | John Haddow | 23 -30 Aug | Fungi | Alan Outen |
| 16 -18 May | Aquatic Biomonitoring | Craig MacAdam | 23 - 30 Aug | Botanical Illustration | Claire & Kerry Dalby |
| 16 -18 May | Pictish Art | Marianna Lines | 30 -31 Aug | Basketry for Beginners | Paul Jeffrey |
| 23 -25 May | Spring Birds | Russell Nisbet | SEPTEMBER | | |
| 23 -25 May | Aquatic Insects | Brian Morrison | 5 - 7 Sept | Terrestrial Environ. Biomonitoring | Craig MacAdam |
| 23 -25 May | Introduction to Mosses | Gordon Rothero | 5 - 7 Sept | Rugmaking for recyclers | Morag Nisbet |
| 23 -25 May | Inspirational Art and Nature | Helen Brook | 15 -18 Sept | Moths | Paul Waring |
| 23 -25 May | Field Archery | Ian Kirkwood | OCTOBER | | |
| 24 -31 May | Archaeology of Orkney | Robin Noble | 3 - 5 Oct | How do Birds Weather the Weather? | Norman Elkins |
| JUNE | | | 3 - 5 Oct | The Power of Plants | Gordon Rutter |
| 6 - 8 Jun | Tree Identification | - | 3 - 5 Oct | Geology and Gemstones | Rosalind Garton |
| 6 - 8 Jun | Spring Walks in the Highlands | Sheila Wickens & Judi Oates | 10 -12 Oct | Conservation Conflicts: Finding the Solution? | Roger Crofts |
| 6 - 8 Jun | Plant Photography | Gordon Rutter | 10 -12 Oct | Exploring the Night Sky | Brian Kelly |
| 6 - 9 Jun | Wild Flowers | Sheila Brinkley | 10 -12 Oct | Walking in the Perthshire Highlands | Judi Oates |
| 27 -29 Jun | Orchids of Scotland | Brian Allen | 10th -17 Oct | Capturing the Autumn Landscape | Sue Murdoch & Brian Thomas |
| 27 Jn -2 Jy | Grasses | Judith Allinson | 17 -19 Oct | In Queen Victoria's Footsteps | Alastair Lavery |
| 27 Jn -4 Jy | Summer Flowers | Mike Scott | 17 -24 Oct | Autumn Birds | Russell Nisbett |
| JULY | | | 24 - 26 Oct | Birds for Beginners | Nick Mutch |
| 2 - 5 Jly | Coastal Plants | Sheila Brinkley | | | |
| 15 -18 Jly | Butterflies and Moths | David Brown | | | |

Roddy at Rothbury*by Roddy Clark*

The instant we entered into our base of Rothbury by the main road from Alnwick at the start of the holiday, I was immediately attracted to it. It has a most tranquil and picturesque village centre with various green spaces of all shapes and sizes on one side of the sloping main road, and a long tree covered green slope on the other, above which is a higher parallel street where the shops and inns continue. Rothbury is delightfully situated, nestling between high hills, with Cragside and its famous estate standing especially high at one end of the village. The River Coquet adds considerably to its charm and the view along the river valley with its gently rising slopes towards Cragside, is extremely restful.

We were very fortunate in being told by our evening speaker of the various colonies of Pipistrelle and Daubenton's bats which roosted around the village both at the bridge over the River Coquet and at the old derelict mill about 15 minutes walk downstream. A major highlight of the holiday for me was the thrilling experience of seeing the Pipistrelle Bats at the mill come streaming out from under the eaves of the building and flying across the adjacent lane into and beside the neighbouring wood. It was a truly memorable sight and fascinated me enough to keep me transfixed to the same spot for some considerable time. The whole location with the dark wood on top a rock/stone wall on one side, the old mill on the other side and the lane in-between, helped to create a feeling of mystery.

A still further awesome sight lay where the lane gained the side of the river not far from the mill. This was where, after a series of waterfalls, the water in the river was forced powerfully through a short deep narrow chasm. The chasm was formed by a large expanse of rock reaching out from both the banks. It was most spectacular how this wide river narrowed so quickly to a narrow passage, then fanned out again to regain its former width.

The group exploration of Holystone and the nearby Coquet Valley (which flows from the Cheviot Hills) was sheer delight. In the initial part of the walk through both coniferous and deciduous forest our leader gave us a fascinating idea of animal life in that habitat through what we saw lying on the ground and marks left there. It was particularly exciting to come upon a very extensive Badger sett in the deciduous part of the woods, just off the track. Extensive views of distant gentle slopes revealed themselves where the track emerged from the trees. After negotiating a rugged path, crossing a burn and re-entering the coniferous forest, we left the forest to come to a vantage point where we saw an example of land

management where the National Park people had planted trees and fenced off areas.

When we reached the Coquet valley itself, every turn of the valley opened up ever more pleasant vistas with fold after fold of the hills sloping up gently from the valley floor. It proved a rich area for the botanists, some flowers being found on the slopes of a ravine, and in a still piece of water beside the river. At the limit of our walk we walked alongside a series of hay meadows where the local farmer has an agreement with the National Park Authority to manage them to produce hay in such a way as to encourage the growth of wild flowers characteristic of a hay meadow.

Luck was with us, as the farmer was there to tell us all about this arrangement himself and how it worked to the advantage of both himself and the National Park.

On our coastal walks at Cocklawburn and Low Newton-by-the-Sea (approached from Craster), the views along the coast were splendid with whole bays being visible. At the second place there were fine extensive stretches of golden, sandy beaches round the bays. What a pleasure it was to gaze at the mixture of sand, sea and surrounding land. A particularly fond memory is of a point on the sands near Low Newton where there was a strong sense of calmness from the clear sparkling water of a river flowing gently across the sands towards the sea after it had meandered in a most intriguing way across the land behind the beach.

There were also stretches of shore with several interesting geological features. At Scremerston numerous shelves of rock sloped horizontally, at a slight tilt, into the water. A similar feature was also visible between Low Newton-by-the-Sea and Craster. These reminded me very much of the limestone pavements I had seen a long time ago on a Edinburgh Natural History Society holiday at Malham in Yorkshire. They were divided into blocks with cracks in exactly the same way. An extraordinarily elongated rock formation, curved at one end, with layered strata revealed in its vertical sides, stood proud above the surrounding pebbly beach quite near Dunstanburgh Castle, just north of Craster.

Below Dunstanburgh Castle there is a magnificent natural amphitheatre, formed by the very high sea cliffs curving round. We paused here for some considerable time to observe the colonies of sea birds - Kittiwakes and Guillemots - nesting on the cliff ledges. I marvelled at how the birds were able to nest there without slipping off. Our speaker at the evening talk had told us that this was one of the best colonies of sea birds and he was certainly right.

The Craster to Low Newton-by-the-Sea circular walk revealed a typical Northumbrian coastal hinterland - low, sometimes wooded escarpments stretching across the county. Combined with the outline of the ruined Dunstanburgh Castle, it made for dramatic scenery. The castle itself was quite a feature.

I also have happy memories of the various lake reserves we passed at Low Newton, Hauxley and Druridge, south of Amble. Most were very pleasantly situated in gentle, undulating, restful countryside. The last reserve mentioned was the best one for seeing bird life on the water, as regards diversity of species. There was the exciting spectacle of seeing one of the species of Tern flying low over the pebbly beach at Hauxley in their search for food.

Other attractions to me of the coastal explorations were the rich botanical finds at Cocklawburn and Hauxley and remnants of the industrial heritage in the form of a limekiln on a promontory between two beaches at Scremerston. One final glorious image to me is of the quaint seaside village of Craster, made particularly attractive by its private seaside gardens, full of bright flowers, with its small harbour below.

Tuesday at Craster

by Margaret White

The weather was not promising, with grey clouds racing in a strong wind and sprinkling us with rain, when some of the party set out on the seven-and-a-half mile walk from the Tourist Information Centre at Craster to Low Newton-by-the-sea, taking in the harbour, Dunstanburgh Castle, Embleton Bay and returning by Dunstan Steads, Dunstan Square and the Heughs.

We took the path from the harbour at Craster village over a large area of grassland, to the castle. It was hard to believe that the rocks on the shore were not hewn out by hand, so well did they fit together to form 'walls' and levels. Amongst the stones a beautiful show of Thrift *Armeria maritima* Silverweed *Potentilla anserina*.

We climbed upwards to the castle in a downpour, watched suspiciously by a herd of light-beige coloured cattle, all packed

tightly together but separated from us by a fence. Here we lost part of our group who wished to see the ruins. Those remaining continued round the castle on a narrow slippery path which led down to the stacks below. We heard, then saw the Kittiwakes and glimpsed a row of Guillemots standing along the base of the stacks, enjoying the rain - which we were not! Giving up on bird-watching we pushed on along the shore, hoping for a break in the weather.

We were now on a beautiful part of the walk, full of brilliant colour and the rain had stopped. The sea was sparkling and the sands were throwing back the sunlight as we strolled over the dunes beside a golf course. There were Cowslips *Primula veris*, Sea Campion *Silene uniflora*, Bloody Cranesbill *Geranium sanguineum*, and the Northern Marsh Orchid *Dactylorhiza purpurella*, to name but a few. On the shore there were some interesting rock formations, one of which looked like a small tarmacadamed breakwater, but was a natural feature.

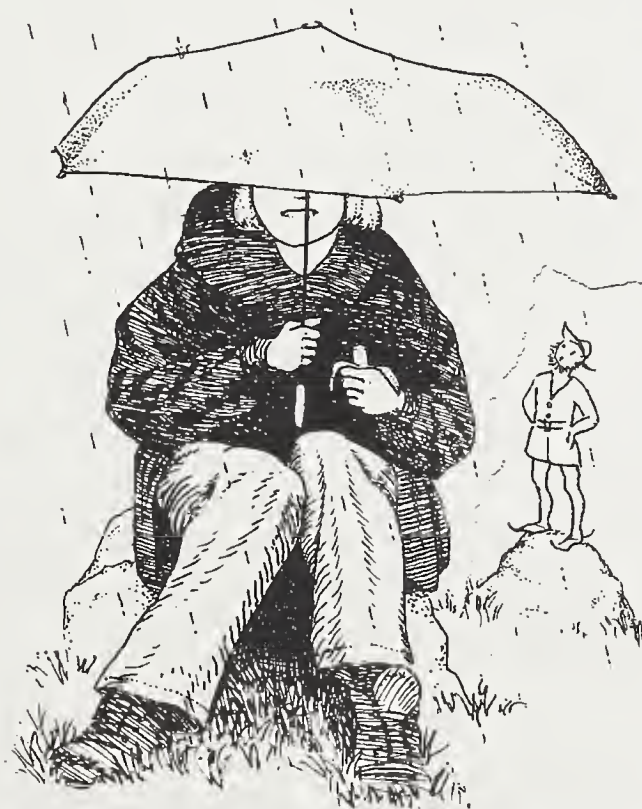
The way now dropped down to the long, beautiful, sandy beach of Embleton Bay, where we soon chose a sunny spot out of the wind, for lunch. Our bulging cheeks were photographed by a grinning Roddy, who was thwarted by another shower of rain, which sent us and our lunches under the umbrellas!

Again the weather relented and we pushed on to Low Newton. Sand and sunshine make one thirsty, and Low Newton boasts a National Trust Inn, the Ship Inn. Here we drank cups of tea under the supervision of Arthur, the inn's ginger cat.

We walked inland through a Nature Reserve between low hedges of Burnet Rose *Rosa pimpinellifolia*, with

more Northern Marsh Orchids and Bloody Cranesbill and passed lovely stands of white and pale pink Campion. Sharp eyes spotted a Small Heath Butterfly and a Six-spot Burnet moth. We came to a hide and climbed in and filled it. Collectively we saw Coot, Wigeon, Tufted Duck, Shoveler, Ruddy Duck, Dabchick, Gadwall, a Heron, Black-headed Gulls with young and a gaggle of Greylag Geese with goslings all under the guard of an aggressive gander acting as a lookout with its neck straining upwards.

We now had warm sun, blue skies, Larks singing and a grassy path to lead us on. We climbed behind the high



WHAT A LOVELY BIG TOADSTOOL!

dunes and ambled downwards to meet two golfers searching for a ball in the rough. We stopped to chat and became very popular when Lyn found their ball. One said he never minded searching for a ball in the rough here as the flowers were so beautiful. Later we saw the same pair again in the rough and before we left the golf course behind saw one of their balls falling into the burn. Still, they were having a nice day in the sunshine amongst the flowers.

We tramped steadily along the straight stretch of road to Dunstan Steads Farm, and had dramatic views of the ruined castle. Going through a gate we were once more on a softer surface as we walked downhill. Turning onto a bridle path with the Heughs, a low range of craggy hills, on our right we reached a path through woods which delivered us back to the centre.



Dunstanburgh Castle

Alison Wilson's walk

How do you recognise botanists (apart from the obvious 'bottoms up' posture) ? They are the ones who ignore a perfectly good path leading to a popular tourist attraction and risk limb if not life slithering over wet rocks or wading in soggy bogs.

*The visitor attraction in this case is Dunstanburgh Castle, dramatic stronghold of John of Gaunt: one mile of easy walking and it took us over 3 hours Leaving Craster - famed for kippers and allegedly a link with the phrase 'having a kip' (reference to the sleeping accommodation of the folk involved in the trade) - within minutes Mary C's group were scrambling over coastal rocks and puddling in seaside pools finding *Carex otrubae*, *Glaux maritima*, *Juncus gerardii*, *Carex distans* while Jackie's team were rewarded with some interesting grasses and bog plants.*

*For lunch some sought the shelter of the impressive castle walls dating back to 1313, while others opted to find a (relatively) wind-free spot overlooking the cliffs and continued birding and botanising while they ate. The aptly named Gull Crag, dropping sheer for 100 ft to the sea, is home to innumerable nesting seabirds (mainly Kittiwake, Fulmar, Guillemot) and after lunch Mary T was still watching the non-stop activity entranced when Jackie RAN back along the track to catch the former and ensure she saw a tiny specimen of Swine Cress *Coronopus squamatus* - a first for many of us.*

*The dune flora was really beautiful with dark purple Northern Marsh Orchids *Dactylorhiza purpurella* rivalling*

*the huge patches of *Geranium sanguinum*, impossible to hurry as there was so much to look at/for and enjoy.*

Time was slipping past - but Jackie's suggestion of saving time by leaving the dunes and walking along the beach came under the heading of 'famous last words' as the search for plants was immediately replaced by the search for interesting pebbles and examples of sea-life, and progress was even slower. But all in all, it was a highly enjoyable and successful day.

Wednesday

Upper Coquet Valley

We had a lovely day led by John Steele who is Species and Habitat Officer, Northumberland N P and who wrote this report on Northumberland National Park's work in Upper Coquetdale.

The River Coquet rises on the Scottish border with England and for the first few miles it winds its way through a deeply cut valley within the rolling Cheviot Hills. This was the venue for an excursion in mid June 2002 with society members to look at the special wildlife features and the work currently being undertaken in the valley by the National Park Authority.

The Holystone Woodlands were our first port of call. These are a mix of mature conifer plantations and ancient semi natural woodland. Much of these Forestry Commission native woodlands are managed in partnership with the Northumberland Wildlife Trust. The National Park Authority assists in their management as a wildlife resource by offering financial and technical support. The plantations are now reaching maturity and have recently been subject to a restructuring programme. The Park Authority was a principal consultant mainly with reference to future landscaping and tree species composition.

Our walk took us through mature Oak woodland that boasts a fine show of tussocky *Lucobrium* moss and an extensive Badger sett that showed the characteristic terracing of past digging by its occupants. Recent bat surveys by the Park Authority have shown that at least 5 species of bat use the woodland and adjacent clearings as feeding habitat. The Common Pipistrelle has now been separated into two species and both were identified here using their distinct vocalisations. Natterers and Whiskered Bat along with Brown Long Eared have also been recorded. The Authority is now undertaking and commissioning additional bat studies throughout the area to help guide the future management of the National Park.

The Dove Crag Burn and its ancient Birches festooned in lichens, revealed Spotted Flycatcher, Redstart and a calling Green Woodpecker on our way back to the

picnic tables and lunch. The Junipers in the area are some of the very few specimens remaining within the Park boundary and are again the focus of special attention in its rehabilitation.

Suitably refreshed, the members' convoy progressed deeper into the hills on the single track road to the little farm of Linbriggs, perched high above the gorge containing the tumbling River Coquet. The river-cut gorge extends for 2 miles and the upstream section was to be subjected to the scrutiny of those sharp eyed ENHS members. Plants abound, especially on the outcrops of rock that have proved inaccessible to stock over the years. Many familiar species occur but Meadow Saxifrage, Burnet Rose and Goldenrod always draw attention here amongst few relict native Ash and Aspen that cling to the steep slopes. The speciality of the area is the tall herb, Jacob's Ladder. It also clings on to the damp inaccessible slopes in one of only a few native sites in Britain. This species has been the focus of my attention for a number of years now simply because of its scarcity and very localised and vulnerable location. Surveys are carried out annually to monitor flowering and seedling productivity. Findings show quite a variation of flowering from year to year but a stable number of plants. Unfortunately, it seems the river itself may limit the plants' numbers, as seedling are frequently swept from the lower slopes in times of flood. Propagation from seed and recolonisation of similar habitats in the area are now being considered as a safeguard to the existing colonies' longevity.

The next stop was Barrowburn Farm where the hay meadows were beginning to show the wide range of species so characteristic of this dwindling habitat. Yellow Rattle, Wood Cranesbill and Melancholy Thistle typify the species of these upland hay meadows. The importance of the meadows is shown in their designation as a Site of Special Scientific Interest as well as being classified in a European context. The meadows are managed in the traditional way of cutting at the right time of year and having limited fertilizer input from farmyard manure. The Park Authority have an agreement with the farmer to continue with this practice and in return the farmer receives compensation for the loss of yield he has to endure in not using artificial fertilisers to boost his crop. This latter course, should he ever take it, would destroy the floristic interest, as has been seen over the countryside in the last few decades.

Days in the field always go too quickly for me and this was no exception. I have to say the highlight for me was the company of knowledgeable and enthusiastic naturalists of the ENHS and in particular Margaret Little, who pointed out my first ever Ivy Leafed Crowfoot, right on my own door step!

Thursday

FARNE ISLANDS TRIP

Natalie Taylor

Mention of the Farne Islands is guaranteed to cause a rush of excitement in the heart of any birder. Those who have visited the islands speak blissfully of Puffins standing just inches away guarding their burrows, and the delightful, if somewhat dangerous, close encounters with the terns. To those of us who have never had a chance to visit them, this is the stuff of dreams. My excitement at the prospect of a trip to Staple Island as part of the Nats' Northumberland trip, was boundless as I and eleven other intrepid Nats set sail from Seahouses harbour on Thursday morning.

The 28 islands, lying between 2 and 5 miles off the Bamburgh coast, are the most easterly remains of a volcanic feature known as the Great Whin Sill, which extends west across the country and forms the foundations of Hadrian's Wall. The geology of the dolerite rocks results in a mixture of steep cliff-faces, providing nesting sites for Razorbills, Guillemots, Fulmars, Kittiwakes and Shags; and plateaux used by Puffins, Oystercatchers, Herring Gulls and those infamous Terns! The islands were bought by the National Trust in 1925 and are now managed to the benefit of the fifteen or so species which regularly breed there.

Even before our boat the *Glad Tidings* had left the harbour our birding began, as we were treated to lovely views of Eider ducks with chicks bobbing about in the water. Eiders are said to have nested on the Farnes, the southernmost extent of their breeding range, since time immemorial, with ancient manuscripts describing them as a favourite of St Cuthbert, who lived on Inner Farne from 676 to 685, and returned there to die in 688. It was not long into our trip that the first excited cries were heard – "Look, Guillemots"; "Razorbills to the left"; and finally the one we had all been waiting for: "PUFFIN"! Our journey along the south-east side of the island group was accompanied by a commentary by the crew, telling us not only about the wildlife, but also the history of the islands.



Ivy Leafed Crowfoot

It is probable that the Farnes have been inhabited for over 1600 years, although there are no records to prove this until the arrival of St Aiden in 640. It is thought that the monks living on the islands burned beacons to warn sailors of the dangerous rocks from as early as the 9th century, the first 'real' lighthouse, Prior Castell's Tower, being built in 1500. However it was not until 1672 that Charles II granted a licence for the first official lighthouse to be established on Inner Farne. We continued out to Longstone Island, one of the biggest, and the furthest from shore. It was from here that Grace Darling and her father left to make their historic rescue of survivors from the wreck of the *Forfarshire* in 1838. As we passed Longstone Island we had excellent views of Grey Seals hauled out on the rocks, lazily waiting for the incoming tide to wash them from the rocks. The Farnes are a very important site for Grey Seals.

Finally, after a very interesting 45-minute trip, the moment came that we had all been waiting for - we were about to land. There are, to me, two magical elements of seabird colonies - the sound and the smell! Both of these enveloped us as we eagerly climbed from the boat.

The sheer number of birds that greeted us was phenomenal, so much so that it was hard to know where to start! We had hardly set foot on the island



"PUFFIN"!

before we were surrounded by Shags, sitting on their nests of seaweed, growling and hissing at visitors, both human and avian, who got too close. Wandering further inland we discovered the grassy areas riddled with the nest burrows of Puffins. It was an amazing sight to see, literally hundreds of Puffins bustling about the place, some squabbling with the neighbours, some busily bringing beakfuls of sand eels back to hungry chicks; even those simply standing guard over their burrows managed to look busy!

Moving further around the island desperately trying to absorb the spectacle before us, we found ourselves on the far side of the island from the landing area, looking across to the mainland. From here we had the most fantastic views of Shags nesting inches from our feet, and Guillemots and Kittiwakes nesting on the cliff faces feet away. The birds were so close that 'scopes and bins became redundant, and you could just sit, stunned, observing the minutiae of the plumage and behaviour. It was great to be able to see not only the adults, but also the young birds, some begging for food, others being fed, some dozing gently in the

warmth of the sun, some looking eagerly around them, all different and worth watching.

It is difficult to describe the feeling that you get being on the island with so much life and activity going on around you, almost like being in the centre of a universe with everything revolving around a central point that is you; the major difference being that you are not a great force like the sun forming an axis, but rather a speck of inconsequence around which everything spins with a total disregard.

One of the strangest things I saw was a Shag sitting, apparently quite happily, on the nest, who suddenly and quite calmly rose up, gently picked up one of the two eggs and threw it from the nest. As I stared in utter disbelief at the action, the Shag settled back down for a minute and then, just as unexpectedly, rose again, gently picked up the single remaining egg, and threw that from the nest. My shock at witnessing this is my excuse for suddenly finding myself on the wrong side of the island several minutes after we were supposed to be back at the boat - ooops! However, I have been assured that the highly amusing sight of me madly running across the rocks dodging birds and clefts in the rock, clutching bins, 'scope and notebook, was worth the delay!

Our journey back to Seahouses was by way of Inner Farne, the Tern island. There are four species of Tern that regularly breed on the Farnes: Sandwich, Common and Arctic which we had good views of, and the rare Roseate, with Little Terns occurring infrequently. As the *Glad Tidings* slowly increased the distance between us and those magical islands, the number of birds around us slowly decreased, although the excitement, thrill and feeling of complete awe stayed with me for days.

P.S. If a visit to the Farnes isn't enough to lure you to Seahouses, several of us can testify to the excellence of the fish and chips there!!



Plants of Druridge Bay

by Jackie Muscott

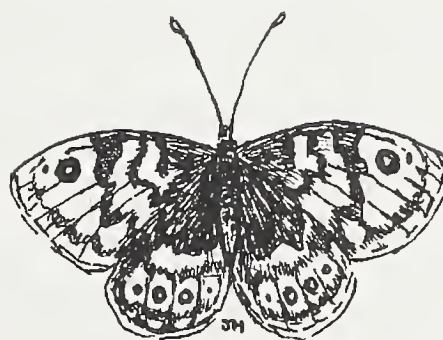
This was the day when some members of the party set out for the Farne Islands, while the landlubbers headed for the various nature reserves of Druridge Bay. Most began the day at the Low Hauxley Nature Reserve. Twenty years ago this was an abandoned opencast mine; now it's a large lake with islands, surrounded by trees and shrubs, and with 5 hides for birdwatching. Near the car park are smaller ponds, and an area of dry grassland (coal spoil?) with a great variety of plants, some introduced and some which seem to have introduced themselves.

Among the more unusual of these plants were Yellow-wort *Blackstonia perfoliata*, Dyers Greenweed *Genista tinctoria* and Field Gromwell *Lithospermum arvense* rarely seen north of the Border. Kidney Vetch *Anthyllus vulneraria*, Bloody Cranesbill *Geranium sanguineum*, Marjoram *Origanum vulgare* and Wild Mignonette *Reseda lutea* can all be found in the Lothians, but none is common, and Maiden Pink *Dianthus deltoides* is a UK rarity, while Broad Bean *Vicia faba* is a pretty unusual weed!

The ponds and wet areas contained many familiar plants, but also some less familiar ones such as the Least Water Lily *Nuphar pumila* and the Common Fleabane *Pulicaria dysenterica*, while one small pond contained New Zealand Pigmyweed *Crassula helmsii*, a small but invasive introduction. Eradication will probably involve clearing the pond.

Following an examination of these plants most people made for the beach and some of the hides. Here the seaside plants were more commonplace, including Marram *Ammophila arenaria* and Sand Sedge *Carex arenaria* both of which have underground rhizomes which help to bind the sand dunes.

It was nice to find Houndstongue *Cynoglossum officinale* and Lesser Meadow Rue *Thalictrum minus* scattered among the dunes however. We visited the hides and were confined to one for a considerable time during a heavy shower.



Wall Brown Butterfly
Lasiommata megera

Some people went on to the Nature Reserve at Druridge, but we were tempted down another of the paths by the promise of Blue-eyed Grass *Sisyrinchium bermudiana*. It's a strange little plant, a member of the Iris Family with star-like blue flowers about 3/4 inches across, several at the tip of each stem, flowering one at a time. We duly found it in damp grass at the edge of the path.

It was not much of a day for butterflies, but we saw a few Green-veined Whites *Pieris napi* and one Wall Brown *Lasiommata megera* before it started to rain. The latter was new to most of us as it's on the edge of its range this far north.

Sand Sedge
Carex arenaria



This shows the line of an underground rhizome

DRURIDGE POOLS

by Mary Clarkson

A small group spent the afternoon having a look at one of the other nature reserves south of Low Hauxley. We made our way to Druridge Pools, another area of restored opencast coal workings consisting of a deep lake and several wet fields which are managed to provide a habitat for breeding, passage and overwintering birds. There are two hides, quite close together, one at the side of the lake and the other overlooking the fields. We went first to the lake hide where we had an excellent view of a Great Crested Grebe on its floating nest. It was an afternoon of squally showers and we spent longer in the second hide than we might have done, waiting for a dry period to go back to the car. At first sight, not many birds seemed to be around but the rather long grass was hiding them and we eventually saw a fair number. Brief views of Grey Heron, Redshank and Teal tested our identification skills and knowledge of field markings. A stop at a farm shop near Warkworth allowed us to buy an assortment of local cheeses and have a pleasant cup of tea.

Going Batty at Rothbury: Short extract from a notebook...

13.6.02 – Thursday

"Fantastic end to a super day. After dinner went for short walk down to river, about 9:30, nice twilight, excellent bat weather, calm, warm (ish!) and dry. Lots of Pipistrelles about, feeding along the edge of the trees on the banks – why didn't I bring a bat detector with me???

Walked up towards the old mill, met other Nats, apparently lots of bats emerging from mill. Watched Pipistrelles leaving roost in mill,

wonderful to watch, some obviously still pregnant, dropping like stones as they left, others just as obviously already given birth, up and away as soon as they were out. Stayed for about 15/20 mins, estimate about 100 bats seen emerging in steady stream. Seems to be a fairly large roost, probably 55KHz pips judging by size of roost and location – good to see. Slowly made our way back downstream, still lots of Pips flitting around the trees, also a number of Daubenton's hunting typically low over the river. Great way to spend an evening, stood watching for quite a while. Had brief sighting of a bat flying high and fast upstream, well above the trees – certain it was a Noctule by flight pattern (high, purposeful, direct), size and shape. Couldn't believe it when saw a second (or first coming back downstream), has to have been a Noc. nothing else flies quite like that. Confirmed when saw third (!!!!!), this time flying across river, and although flying high, not as high as the others, also actually heard this one – WOW – first time I've had really good views, not to mention hearing it!!! So fantastic. Things started to quieten down a little after 11, most of the bats had returned to their roosts, having finished feeding, so we, reluctantly, returned to ours.



NS

Natalie

SNAKES

As you walk under the arch on entering 33 Melville Street, look on either side of the uprights, halfway up and you'll find the snake heads. These are ornamental now, but when the houses were built in the 1820s, streets and pavements were dirty and broken and a resident would hire a LINKMAN to guide him home. The link was a torch made of pitch and tow. On reaching the house, the open mouth of the snake was used to douse the link. The linkman had to save his fuel!

There are link extinguishers to be found in Charlotte Square, small and plain ones. They are probably in other parts of the New Town as well.

Dorothy Stuart



Numbers 1-41 Melville street were built between 1820 and 1826. Robert Brown was the architect.

SLUGS AND SNAILS

Ian McCallum

My garden is small as gardens go, but had a good variety of slugs and snails. Wearing my Natural History hat, I thought of bringing a collection of live exhibits to an evening meeting. The exhibits would be in jars suitably identified. The prize exhibit would have been the leopard slug *Limax maximus*. Wearing my Horticultural hat I noticed that my prize hosta had been completely devoured.

If you go into a gardening centre with a slug problem, they will advise that you use slug pellets. If you use them, you may start to wonder why you no longer have Song Thrushes, Hedgehogs etc. I decided to exterminate my slug population in the kindest possible way - by using beer traps, - which was very successful! Although it is important to have the glass jars holding the beer, two or three inches above ground, to prevent the jar becoming a pit-fall trap, and killing beetles and other life forms. Another method of protecting plants from slugs is to use copper 'bangles'. These can be made from a copper pipe cut to give rings 5 cm long/high which are dropped over the plant, and it is said that the slugs will not cross the copper. The rings are available from website (www.slugrings.co.uk).

At this time, when I was taking an interest in slugs, I happened to find the remains of an Indian carryout, which had been thrown onto the top of my hedge the previous evening. On examining the paper wrapper I was surprised to find about fifteen slugs enjoying their repast. Although the slug population was considerably depleted at this time, the aroma of the carryout had proved irresistible. When you consider the effort required to climb to the top of the hedge it is obvious how attractive the carryout was to them.

In conclusion it would appear that the slugs in Lenzie are very fond of their beer and Indian carryouts.

GLEN DOLL

Hill Flower Weekend

6th - 7th July 2002

by Geoffrey Harper

Not the least interesting side to our weekend was Kirriemuir, where many in the party lodged at the Thrums Hotel.

It is no easy matter to find your way into the town, nor to find your way out again. Once in, however, the compact town centre is found to revolve around a life-size (ie rather small) statue of Peter Pan, with the Thrums Hotel and Bellie's Bar equidistant and in opposite directions from the perennial child. Sleepy little town it may be most of the week, but it soon became more of a throbbing rural metropolis on the two evenings we were there, what with strange noises coming from our own bar directly under our beds until 2 a.m. and similar offerings from the karaoke establishment across the narrow street. But it was a pleasant and friendly hostelry, which I'd gladly stay at again.

Saturday was devoted to Corrie Fee, an impressive but not overpowering amphitheatre off Glen Doll. We were privileged to be able to drive beyond the public car park, so that there remained a relatively short walk through conifer plantations, not shown on my 1957 1" O.S. map, to reach the deer fence and an impressively renovated footpath up the Fee Burn.

Even your colour-blind reporter thought that perhaps the most attractive flower, seen almost everywhere on wet ground, was Butterwort *Pinguicula vulgaris*: some magnificent specimens had several stems and more than one flower out. Possibly even brighter were the little jewel-like flowers of Heath Milkwort *Polygala serpyllifolia*. Less colourful but more exciting were such plants as Frog Orchid *Coeloglossum viride*, Alpine Meadow Rue *Thalictrum alpinum*, and quite a variety of ferns, horsetails and lycopods. In terms of rarity, the highlight was probably Yellow Oxytropis *O. campestris*, which was flowering well on a cliff above a steep boulder slope.

Another cliff flamed yellow with Globeflower *Trollius europaeus*. Despite the paucity of trees and bushes, except on the cliffs, the number of 'woodland' herbs was striking - Wood Anemone *Anemone nemorosa*, Dog's Mercury *Mercurialis perennis*, Wood Sorrel *Oxalis acetosella*, Raspberry *Rubus idaeus*, Beech Fern *Phegopteris connectilis*, Oak Fern *Gymnocarpium dryopteris*, and no doubt others. The inverted commas are deliberate: are we deceiving ourselves by the English names we give some of these species, and being misled by where we first encounter them? In short, I have my doubts whether we should think of them as woodland plants, and certainly whether we should regard them as indicators of former woodland. They clearly thrive outside woodland, and perhaps always have done. Maybe

they are actually upland plants of moor, scree, cliff and cleuch - also sometimes found in woods because ecological conditions there are similar. Conversely, perhaps Blaeberry *Vaccinium myrtillus* and Ling *Calluna vulgaris* are woodland plants, also found on moors.

While others in the party were being captivated by the aerial antics of Peregrines, Ravens and Buzzards, your short-sighted and binocular-less reporter was stumbling around, eyes to ground, looking for bits of dead grass. A characteristic feature of moorland is the pale grey strips of the rhizomes of Mat Grass *Nardus stricta*, with close-packed shoots - reminiscent of General Dalyell's beard comb in the House of the Binns - and leaf blades at right angles to the leaf sheaths. The longest specimen found measured 9.5 cm, with two rows of shoots, 30 shoots in each. Knowing it is a slow-grower, I wondered whether, at one shoot per annum, this short length might be about 60 years old. How to find out? Well, examining a live plant showed that each rhizome produces several green shoots each year, and the Biological Flora account confirmed that rhizomes typically add about 2 cm per annum. So, romantic notions about the astounding age of modest clumps of this despised grass could no longer be sustained. Even so, I remain fascinated by those 'beard combs'; indeed have a compulsion to collect them.

Sunday morning saw us meeting once more at the public car park, but this time we drove on further and stopped in Glen Doll beyond Corrie Fee. After tunneling a short way through a dense plantation, the assembled crowd of 17, including Reserve Warden Ken Slater, Ranger Stephen O'Kane, and two other non-NATS, split into a long-distance 'A' group, which aimed to scale the heights and escape the midges, and a smaller lower-level party resigned to spending the day with their small winged friends. As if it were an initiation rite, the former group had to make a precarious crossing of the White Water suspended from a rickety deer-fence while treading on flapping planks offering very little support for the feet. Those of us in wellington boots stationed ourselves in the stream to fish out any casualties.

It was a long haul to the head of Glen Doll, but a very pleasant walk. The view back down the valley became increasingly bird's-eye with every step. Higher up, the bogs and heather were decorated here and there with numerous Chickweed Wintergreen *Trientalis europaea*, which, as Mary Clarkson remarked, recalling something read long ago in 'McClintock & Fitter', is neither Chickweed nor Wintergreen, being a white-flowered member of the Primrose family. Rather less conspicuous were several patches of what was being called Toffee Puss. Suspecting that this would not be found in the index of

Stace, I eventually cottoned on: it was the Scottish Asphodel *Tofieldia pusilla*, with small flattened iris-like shoots not unlike its yellow-flowered cousin Bog Asphodel *Narthecium ossifragum*, but with tiny greenish-white flowers. Greatest excitement on the way up was generated by Mary's discovery of what was for her (and most of us), a new sedge - Mountain Bog Sedge *Carex rariflora*.

Eventually the flat top of Meikle Kilrannoch was conquered, and with it the goal of our climb. We had been homing in on a small exposure of the curious yellowish rock serpentine, and here was plenty of the exquisite Alpine Catchfly *Lychnis alpina*, with a few flowers already fully out, and also some Sea Pink *Armeria maritima* - a bit of a shock to someone not used to its dual role as coastal plant and alpine (rather like discovering that your tedious car-washing neighbour is also a renowned steeplejack).

Animal life was not lacking during the weekend, although the only deer seen was a rather small one, and the 'B' party had with them a geological dog (see below). More prominent than the mammals were the reptiles and amphibians. Frogs of several different sizes seemed to be everywhere, and at least three Common Lizards *Lacerta vivipara* were spotted. One large specimen kept very still so that we could admire its beautiful markings. Jackie and your reporter in one car, and Jean Murray in another, were delighted to see, in Glen Clova on the way home, a party of stoats crossing the road in characteristic staccato fashion.

Meteorologically we could count ourselves among the blessed. There was the odd spot of light rain, just enough to make us put on waterproofs, only to take them off again almost immediately, and to impress on us that we were daring to enter the fearsome Highlands, not lounging around on a sun-baked Mediterranean hillside.

Cloud base was generally above the summits, giving us excellent views of the crags in Corries Fee and Sharroch and down Glens Doll and Clova from the tops. The weather could almost have been stage-managed - an impression strengthened by the onset of rain as we passed Kirriemuir on the way home, and a very clean car by the time the rain stopped on the outskirts of Edinburgh.

This (my first) trip away with the NATS exceeded all expectations.

Congratulations, and voluminous thanks, to our Common Lizard organisation-supremo Mary and also to our excellent leaders Stephen and Ken.



Day 2 - the 'B' Party

by Jackie Muscott

The B party headed for the Dounalt. Ken Slater, the Chief Ranger, led us out above the forest to one of the sites of the Twinflower *Linnaea borealis*. Like Lesser Twayblade *Listera cordata*, this tiny creeping shrub is difficult to find in the heather. It puts up flower spikes just a few inches high, each bearing a pair of small pink bell-like flowers. Linnaeus named it for himself, commenting on its inconspicuousness but not mentioning its uniqueness: it is a member of the Honeysuckle Family but the only species in its genus.

While we were engaged with the flower, Ken's dog Jock disturbed a Red Deer fawn, and had to be restrained from chasing it as it fled into the forest. Subsequently he contented himself with a large stone, which he took home to add to his collection. Apparently he keeps them in his basket, surely an uncomfortable form of bedding. Bones he buries, but stones he keeps.

After lunch we moved towards Craig Maud in search of another of the Glen Doll rarities, Alpine Fleabane *Erigeron alpinum*, a Red Data Book plant. This involved a bit of a scramble up a rocky gully, but was well worth while, particularly as the gully also included a splendid clump of Rock Speedwell *Veronica fruticans*.

En route we noted a number of plants missed the day before, including Mountain Sorrel *Oxyria digyna*, Mossy Saxifrage *Saxifraga hypnoides* and Interrupted Clubmoss *Lycopodium annotinum*; also a Violet Ground Beetle *Carabus violaceus* apparently in the process of eating a slug.

The day was punctuated by short sharp showers, and we met one of these as we headed downhill for home. But as the rain cleared and the sun came out again we were rewarded with the sight of a rainbow apparently lying flat on the valley floor below - a most unusual sight.



Jock - a geological dog

A Birder's View of Glen Doll

It's a strange thing, birding in upland areas: you don't really see that many different species, and yet, those that you do see are always something very special. Our trip to Glen Doll was to prove no exception to this. The Wheatears, Meadow Pipits, Buzzards, Red Grouse and Kestrel were all very nice to see; the House Martins nesting in a great crevice in the rock face were rather less expected and interesting to observe; but the real stars of the weekend had to be the Ravens and the Peregrines. Ravens have always been a favourite of mine, ever since my first awe-inspiring view many years ago, and a trip to an upland site never seems complete without even the briefest glimpse. We were fortunate to get more than just a brief glimpse; we had super views of these magnificent birds flying in their relaxed manner overhead, softly muttering a greeting of "cronk" in passing.

However, the undoubted highlight of the two days was the magnificent views that we had on the first day of the local Peregrine family. In addition to the parents, there were three young, probably about 8 or 9 weeks old, who were fledged, but only just, and still getting the hang of the whole flying and hunting idea! We were treated to the most wonderful views of the youngsters playing in the air, practising the skills that would soon be essential to their survival. Soaring, speeding, breaking, turning, falling out of the sky like a bullet in a stoop that would one day end in a puff of feathers and the death of one species to feed another. Although we guessed at the inexperience of the fledglings from their behaviour, this was confirmed when mother arrived back with a Woodpigeon gripped firmly in her talons and proceeded to make her children work for their meal. Upon her arrival the youngsters had all taken flight calling piteously of their hunger. Seeming to ignore these cries, she rose to a height and suddenly let go her grip on the unfortunate bird. Her offspring had obviously played this 'game' before and set off in hot pursuit of their dinner, using the flight skills that make Peregrines the ultimate aerial hunter. The successful hunter then carried her prize to the rock face with her siblings in hot pursuit, it was super to watch the three sitting on a ledge fighting over the food, with first one then another gaining control of dinner.

So, this was another weekend of upland birding only seeing a dozen or so species, and yet also having some of the most memorable experiences of the year.

Natalie Taylor

DUCKS AND OTHERS ON INVERLEITH PARK POND

by Charles Rawcliffe

| | |
|-------------------------------|---|
| <u>Little Grebe</u> | Occasional: single birds in 1952 (July and August); November 1956; May 1974; June 1989; and 3 times in 1991. |
| <u>Cormorant</u> | Occasional: single birds 25th April 1984 and then 3 times in 1998 in May and June. |
| <u>Greylag</u> | Occasional but may become more frequent; local birds I suggest. First seen in February, 1993 (3), and again in January 1999; February and November 2002. |
| <u>Canada Goose</u> | A single bird was seen by me, and my observations published in <i>The Scotsman</i> , but the actual date has been lost. |
| <u>Mallard</u> | Breeding was recorded in 1991, 92, 93, 94 and 95. The maximum number of pulli was 10 in 1994. I suggest that major predation was from Lesser Black-backed Gulls. They have been recorded every year since 1951. Maximum count was 20 on 31st July 1992. |
| <u>Teal</u> | Rare: a drake on 27th February 1964. |
| <u>Shoveler</u> | Rare: a pair on 24th April 2001. |
| <u>Tufted Duck</u> | Regular: This species occurs every year, both male and female. Numbers have tended to increase. The maximum count was 20 on 18th June 1999. Comes November to March; rarely in the summer. |
| <u>Pochard</u> | Occasional: Both male and female seen singly; on 19th November 1991 there was a pair. |
| <u>Goldeneye</u> | Rare: One female on 22nd November 1997. |
| <u>Goosander</u> | Rare: 1 male on 29th December 1997 - 3 dives and then it flew. |
| <u>Red-breasted Merganser</u> | Regular: between November and April. Only Male seen; on 23rd February 1993 2 males were seen. |
| <u>Coot</u> | Occasional: Single birds, apart from 2 on 26th January 1970. |

Montrose Weekend

22nd to 23rd November

The overriding factor of the weekend was the excellent weather, and considering the floods experienced in Angus prior to our arrival, we were extremely fortunate. It stayed dry the whole weekend, except, obligingly, at night; the rain stopped each morning around breakfast time.

Friday: Some of us travelled to Montrose on the Friday, meeting in the car park at Broughty Castle at noon. We visited the Museum there which houses exhibits from the whaling industry and Antarctic expeditions. We had lunch overlooking the harbour and I was delighted to see a solitary Black-necked Grebe shelter from the stormy sea beyond the harbour walls, together with Red-breasted Merganser, gulls and Redshank roosting on a rocky outcrop. Before checking in at the B&B, we stopped at the SWT Centre at Montrose Basin, did a quick recce of The Old Montrose Pier and the Lurgies and then went on to the esplanade, aptly called The Splash. The heavy sea was a wall of white and grey reaching upwards like a hill in front of us, with the breakers crashing over the steps and up onto the tarred area. A remarkable sight.

After checking in at The Limes B&B, we went for dinner at the Blue Mermaid fish & chip café, light fluffy battered fish, chips and processed peas. Delish! We were then invited to Molly's in Ferryden for coffee and tea. The noise of the Starlings roosting all around outside could not be missed. Many thanks to Molly for her hospitality.

Saturday: After a substantial breakfast, we left the Limes, destination the SWT Centre at Montrose Basin. The Centre itself is excellent, with a shop, video and sound displays describing its work and a marvellous panoramic window overlooking the Basin. The weather was still, clear and sunny. We had wonderful views of Goldfinch, Greenfinch, Blue and Great Tit and a Great Spotted Woodpecker on the feeders outside the Centre. The Basin itself was exceptionally full, with the water a rusty-brown mud colour from all the silt brought down from the surrounding fields by the heaviest rains experienced in the area for many years. This fact meant that there were not many waders to be seen, apart from Curlew, Redshank, Oystercatcher and Lapwing. On the water, we were able to see Grey Heron, Mute Swan, Coot and of the ducks, Shoveler, Tufted Duck, Mallard, Wigeon, Pintail and Gadwall.

The group then split, with some staying at the Centre and some going to The Old Montrose Pier, walking along the path via The Lurgies towards the Bridge of Dun. We were not able to do a round trip though as parts of the path were impassable because of the flooding. At the Old Pier we saw the Dabchicks again, seen by some the previous afternoon, as well as Tufted Duck, Goldeneye and Canada Goose. I was disappointed not to see any Pink-footed Geese at all during the weekend, but I did hear a flock calling in flight. In the hedgerow were Sparrow, Dunnock, Wren, Yellowhammer, Blackbird and Song Thrush. In the flooded fields to the left of the path were Teal, making their lovely 'crick crick' sound, Pochard,

more Wigeon and Moorhen. On the River South Esk we had good views of Red-breasted Merganser, and we were overtaken by a Common Seal swimming up river. The best sighting for me was, first of all a Merlin hunting over the Basin and then a Peregrine coming into the view of the scope, hunting, then sitting resting on the mud flats. There were also Common, Black-headed, Herring and Lesser Black-backed Gull, and a few more waders, Dunlin and Bar-Tailed Godwit. While we were scanning over the mud flats, a Rock Pipit flew past.

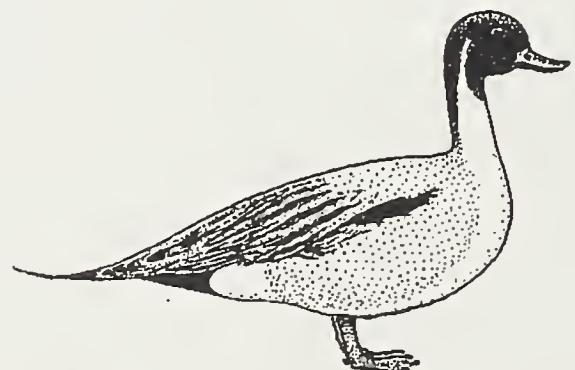
We rejoined the others at the Centre for lunch, where we were kindly given the use of a room downstairs. The afternoon was spent at the Shelduck Hide on the western edge of the Basin. Driving there, we paused again at the Old Montrose Pier, then on to the Bridge of Dun where we saw the extensive flooding all around. The river was in spate and my hopes of seeing a Kingfisher were dashed. Not to be over-looked, a Pied Wagtail was guddling about. We drove on to the Old Mill Car Park. In the trees above the path leading to the hide we were delighted to see Redwing, although the light was poor, since it had clouded over somewhat. Along the path, Mistle Thrush and Goldcrest were also seen and when we reached the edge of the trees we saw Wood Pigeon, Crow, Rook and Jackdaw. Crossing the disused railway and into the open fields, a flock of Linnets lifted up. From the Shelduck Hide we saw lots more of the same, but with closer views, especially my favourite, the elegant Pintail.

On the way back to the car park, we passed a flock of Mute Swans feeding in the field; I desperately tried to make one of them into a Whooper but to no avail!

Back to our respective B&Bs, some via the Centre briefly. We reconvened at The Limes for an excellent dinner. I've had mince and dumplings before but never mince and mealy pudding, a local 'delicacy' I'm told. It was decided to go for a walk afterwards in down town Montrose, admiring the John Peel and Marquis of Montrose statues. We also admired the very plush accommodation at the Fairfield B&B, where some of the group were staying.

I will end my part of the Montrose weekend report with a huge thanks to Andrew for all his efforts in organising what was a superb weekend.

Joanie Fairlie



Joanie's favourite - the elegant Pintail

Sunday saw us over the county border - just - and into Aberdeenshire. We spent the morning on the Reserve at St Cyrus in glorious sunshine. The birdwatchers were first of all entertained by a Peregrine "mobbing" a Buzzard. As well as the more usual small birds a Stonechat was seen and a Twite heard, while out at sea Common Scoters were spotted.

Along the strand the finds were, unfortunately, all dead - namely, a Roe Deer, a Fulmar, a Guillemot and a Hedgehog. However, there were no dead seals, which there might have been at this time of year when they are pupping.

It was hoped there would be some interesting fungi to be found among the dunes beside the sea, but as there had been a strong east wind, everything was covered in blown sand. A little inland however in the more sheltered part the attractively coloured *Mycena pura* var. *rosea*, *Lepista nuda* and *Clitocybe nebularis* were quite numerous. Among the species were also *Hygrophoropsis aurantiaca*, *Stropharia semiglobata* and *Bovista plumbea*.

There were also mosses. In grassy places by the dunes was *Syntrichia* (formerly *Tortula*) *ruraliformis* and everywhere the common *Rhytidiadelphus squarrosus*.

While some gathered mosses and some fungi, others simply went for a walk along the glorious beach. At the far end there were interesting outcrops of rocks. We would have liked more time to examine them and to have had an expert to tell us what we were seeing. They were made up of different lavas, some very slaggy. There were areas where there had been many gas bubbles, and while some of the vesicles were empty, others were filled by a variety of minerals. There were also many mineral veins, and some narrow fractures with sedimentary infill. At this end of the beach there were pebble beds, but we had no time to examine them.

After lunch many set off directly for home while others made a last stop at Lunan Bay. This is another wonderful sandy bay and again Common Scoter were seen. The sun continued to shine till the end of a most enjoyable day.

Betty Mitchelhill

[illegible]

Heather McHaffie, our President, welcomed us to the Guide Hall on the evening of 14th December. A quick look gave one an idea of the work put in by the Excursion Committee and others: down the middle of the hall there was a long buffet table, white covered, with flowers, balloons and the first of various savouries and sweet things to tempt us. In the kitchen, food was being heated; this, of course, was ongoing as people came in for more food. There was home baking, including a large Christmas cake, which was sliced up and enjoyed, after we had had our savouries etc. At the kitchen end of the hall, the wine bar had been set up and here John Watson did great work dispensing wine and other drinks.

People were sitting around in groups chatting or wandering up to the platform end where the display boards had been set up. Here Roddy Clark had a fine selection of photographs taken on our Northumberland holiday. On the platform there was a spread of photographs taken by Dorothy from other outings during the season.

John Watson had brought his computer along to show a succession of digital photographs he had taken on NATS outings and Erich Hoyt provided an atmospheric background of whale recordings.

There were 56 people, including guests, at the party, which was a good turnout, considering that it clashed with other events. It was a very enjoyable evening, thanks to the planning and work by the Excursion Committee.

Dorothy Stuart

The yummy Christmas cake was baked by Natalie. Eds

There is a Midge Orchid as it happens - *Cyrtostylis huegelii*, found in Western Australia. Like the European Twayblades, *Listera* spp, it is greenish with a long grooved lip down which nectar drips. These orchids are out to attract small insects (including midges), which come to feed on the nectar, and make their way up the lip until they make contact with the pollen masses - which are then quite literally glued to them!

MIDGE ORCHID from Western Australia



Groove in lip of Orchid ;
nectar runs own and attracts
small insects

Wood Fires

by Mary Robertson

Nowadays, with central heating to warm our houses, we sit at a gas or electric fire in smoke-free zones. Gone are the days when we had a living fire in our sitting rooms, fuelled by coal or wood. This of course meant extra work: dust and dirt on furnishings and fabrics throughout the winter, followed by the annual spring-cleaning ritual just before Easter. Life is now easier, but one of my great pleasures is to smell wood smoke, so evocative, and to sit by a log fire on cold evenings when I visit my daughter's country house in Normandy.

There is such a comforting warmth from the hearth and the fire speaks and murmurs in the room as the logs burn and the fire settles. Any smoke when the fire is lit goes quickly up the chimney and we sit in a rosy glow watching an odd spark or two rising. As the fire dies down and darkens, it signals bedtime, so we troop upstairs relaxed and warm.

Our parents and generations before them knew the different ways in which various woods burned, knowledge we have lost. Here are two old poems written out for me by an elderly aunt, many years ago, telling us just that:

If the logs are kept a year.
Oak logs burn steadily
If the wood is old and dry.
Chestnut's only good they say
If for long it's laid away -

But Ash new or Ash old
Is fit for a Queen with a crown of gold.

Birch and Fir wood burn too fast,
Blaze up bright but do not last.
Make a fire of Elder tree
Death within your house you'll see.
It is by the Irish said
Hawthorn bakes the sweetest bread.

But Ash green or Ash brown
Is fit for a Queen with a golden crown.

Elm wood burns like churchyard mould;
Even the very flames are cold.
Poplar gives a bitter smoke
Fills your eyes and makes you choke.
Apple wood will scent your room
With an incense like perfume.

But Ash green or Ash dry
For a Queen to warm her slippers by.

Woods for Burning

{from a source not traced}

Oak logs will warm you well, if they're old and dry
Larch logs like Pinewoods smell, but sparks will fly
Birch logs will burn too fast; Chestnut scarce at all.
Hawthorn logs are good to last, if cut in the Fall.
Holly logs will burn like wax; you should burn them green.
Elm logs like smouldering flax; no flame to be seen.
Pear logs and Apple logs, they will scent your room.
Cherry logs across the dogs, smell like flowers in bloom.
Yew logs for Christmas time; Beech logs last well.
Scots log is a crime for anyone to sell.
But Ash logs are smooth and grey; burn these young or old,
Buy up all that come your way; they're worth their weight in gold.

NEW BOOKS SINCE SEPTEMBER 2002

| | |
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| Collins Bird Guide | S. Keith et al |
| British Wild Orchids | H. Angel |
| Concise Guide to Butterflies | R. and R. Gouden |
| Field Key to Wild Orchids of Scotland | P. Woods and M. Bates |
| Ordnance Survey Guide to Gardens in Britain | R. Pearson et al |
| Edible Mushrooms and Other Fungi | Michael Jordan |
| Mushrooms & Toadstools - Collins Wild Guide | Brian Spooner |
| Illustrated Encyclopaedia of Minerals & Rocks | J. Kourimsky |
| Mountains and Moorland (Natural History of Br. & N.Eur.) | A. Darlington |
| Owls and their Natural & Unnatural History | J. Spark, T. Soper |
| Insects (Observers) | E.F. Linssen |
| New Atlas of the British and Irish Flora | Preston, Pearman and Dines |
| The Mystery of Migration | R. Baker |
| Riding with the Dolphins | Erich Hoyt |
| Meeting the Whales | Erich Hoyt |
| Whales and Dolphins | M. Carwardine, E. Hoyt, R. Ewanfordyce and P. Fill |

SOCIETY EQUIPMENT

In addition to books held in the Library, the Society has various other items which can be borrowed by members for their private use, including LP records of birdsong with accompanying booklet, and a recording of Grasshoppers.

Needless to say, members will be responsible for the care of books and equipment on loan.

| | |
|----------------------|---|
| Telescope: | A Bushnell Spacemaster of 20x - 40x magnification, in carrying case and a car window-mount for in-car use. Apply to Molly Woolgar (Tel: 0131 667 2688) |
| Microscopes: | High and low power microscopes. Apply to Margaret Perry (Tel. 0131 447 3515) |
| pH Meter: | Apply to Elizabeth Farquharson (Tel. 0131 447 1994) |
| Mammal Traps: | Twenty-four small-mammal traps. Apply to Elizabeth Farquharson (Tel: 0131 447 1994) |
| Photographic slides: | A comprehensive slide collection left to the Society by Janet Raeburn. The subjects are mostly botanical but also include birds, mammals, butterflies and Scottish scenery. They are kept in the Library. |
| Bawsinch Key: | The Bawsinch Nature Reserve at Duddingston is managed by the SWT, who allow the Society to hold a key for members. Apply to Jim Stewart (Tel. 0131 447 4210) |
| Computer Scanner: | Apply to Sandra Stewart (Tel: 0131 441 2641) |
| Overhead Projector: | Apply to Betty Smith (Tel: 0131 440 0888) |
| Slide Projector: | Apply to Elizabeth Farquharson (Tel. 0131 447 1994) |

ACKNOWLEDGEMENTS

The Journal Editors thank all the contributors for producing such a variety of articles.

Special thanks go to Eric Perry and Jackie Muscott for producing all the lovely drawings. The lovely drawing of Dick Hunter's Memorial Walk is by Jennifer Adamson, one of our youngest members.

The Journal Committee do a sterling job checking the proofs.

The deadline for next year's Journal is Sunday, 21st December, 2003, but if you have any ideas NOW, please let us have them as soon as inspiration strikes. If you see or find anything unusual, please let us know right away, for next year's Observations.

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